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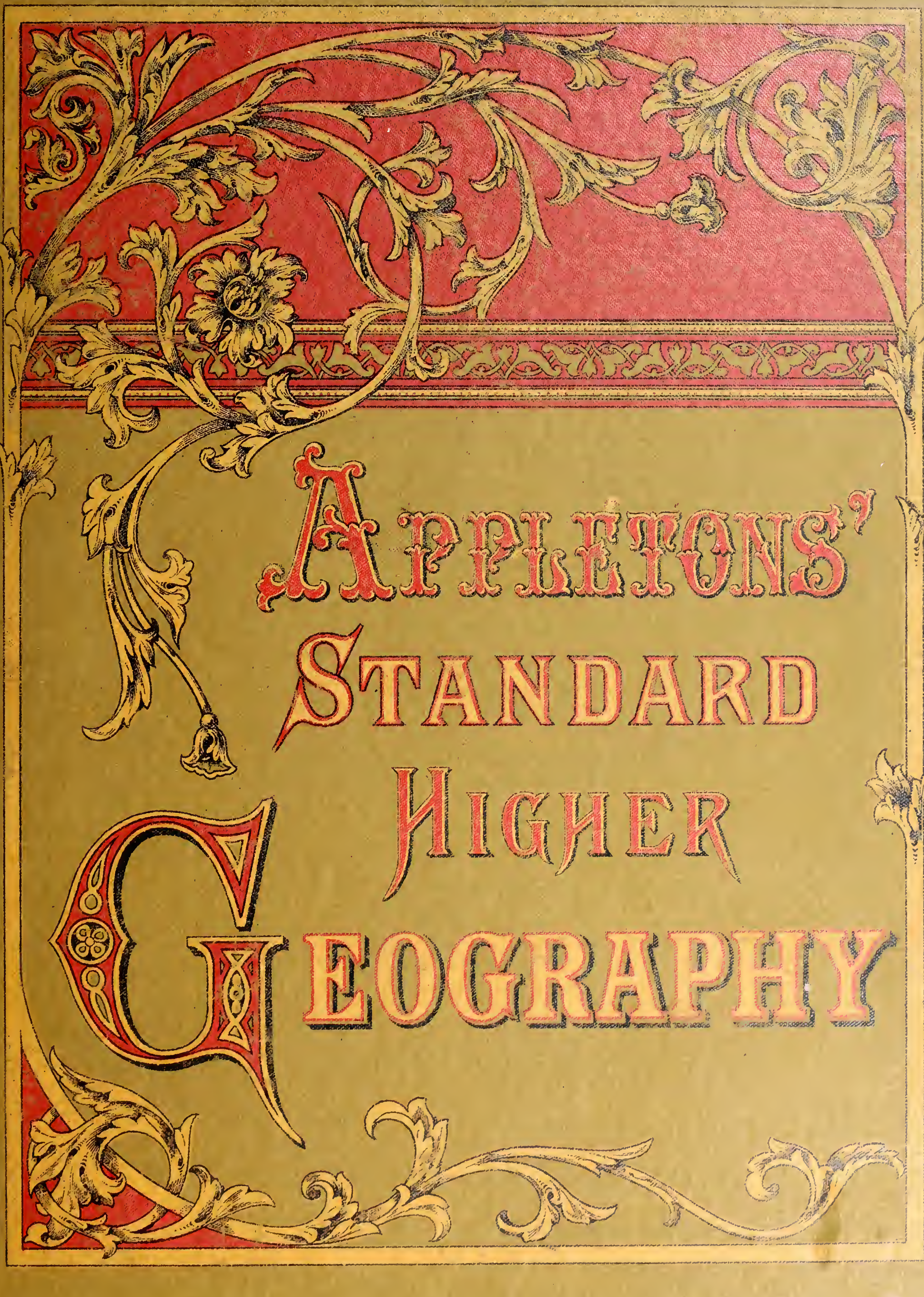

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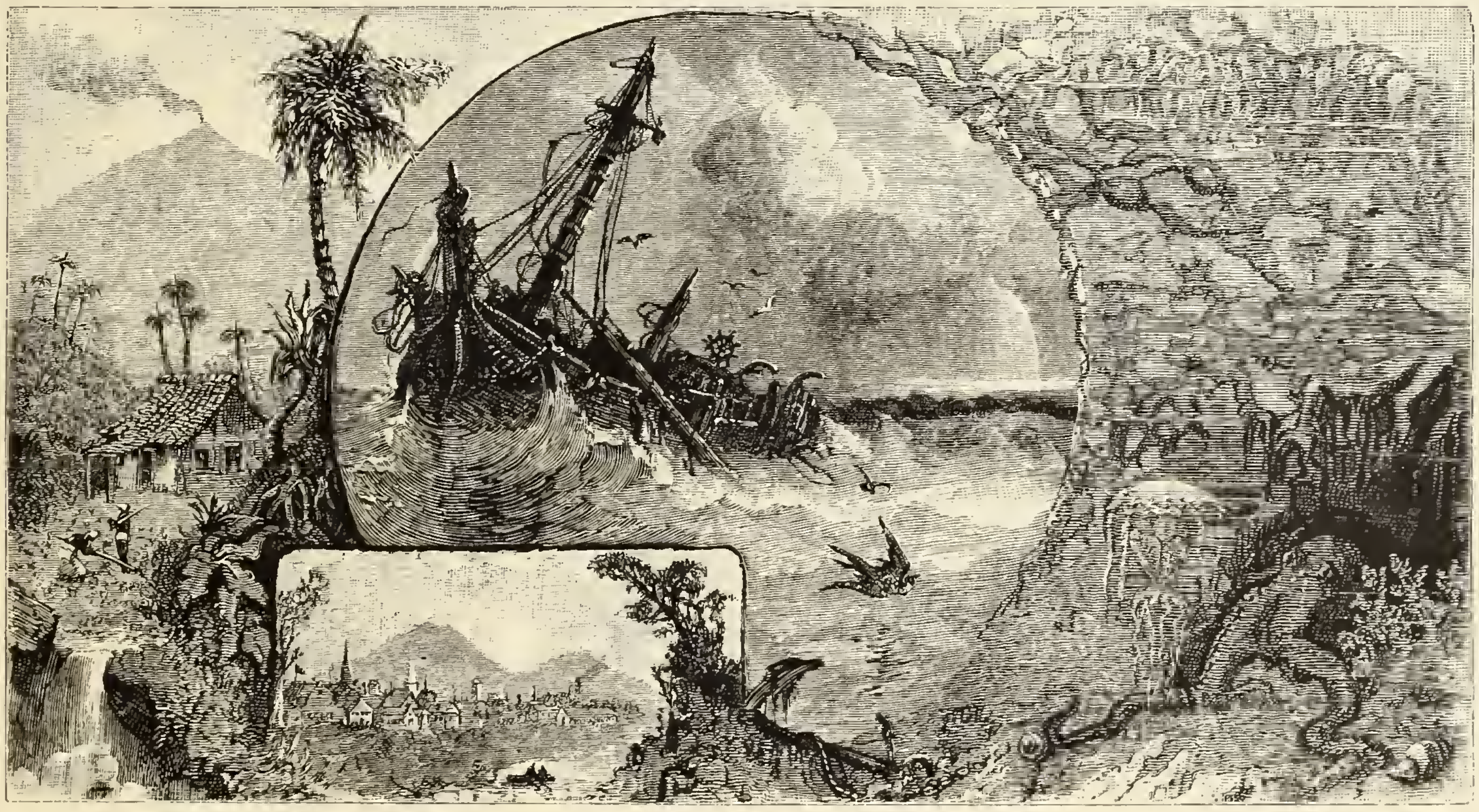
APPLETONS'
AMERICAN STANDARD GEOGRAPHIES

BASED ON THE PRINCIPLES OF THE SCIENCE OF EDUCATION, AND GIVING SPECIAL PROMINENCE
TO THE INDUSTRIAL, COMMERCIAL, AND PRACTICAL FEATURES

HIGHER GEOGRAPHY

EMBODYING A COMPREHENSIVE COURSE WITH MANY ORIGINAL FEATURES



ACCOMPANIED WITH NUMEROUS ENGRAVINGS ILLUSTRATIVE OF NEW SUBJECTS, FROM SKETCHES AND DESIGNS BY DISTINGUISHED ARTISTS—WITH POLITICAL MAPS COMBINING EVERY CONVENIENCE FOR BOTH STUDY AND REFERENCE—WITH PHYSICAL MAPS SHOWING AT ONCE, BY A NEW ARRANGEMENT, NOT ONLY DIFFERENCES OF ELEVATION, BUT THE PRINCIPAL MINERALS, ANIMALS, AND VEGETABLE PRODUCTS OF EACH COUNTRY—AND WITH A COMMERCIAL MAP OF THE WORLD, DISPLAYING THE CHIEF EXPORTS OF THE LEADING COMMERCIAL CITIES, AS WELL AS STEAMER-ROUTES, SUBMARINE CABLE-LINES, ETC.

NEW YORK,
BOSTON, CHICAGO, AND SAN FRANCISCO
D. APPLETON AND COMPANY
1882

PREFACE.

In preparing this volume, the aim has been to combine beauty of typography, *usefulness of illustration*, attractive maps, and every element of mechanical superiority, with a variety of original features, and the improved methods followed by the most successful teachers of the day. In furtherance of this object, no pains have been spared to secure the ablest assistants in every department, and the aid of those best qualified to render service with their criticisms and suggestions.

This Higher Geography is not a repetition of the Elementary, either in its matter or in its mode of developing the subject. In this book, the earth, viewed from a standpoint which the somewhat maturer mind has been enabled to reach, is considered first as a whole. It has been a primary object from the outset to show the connection between the phenomena of the universe, and the dependence of the facts of Political, on those of Physical, Geography; for it is believed that these facts will be readily remembered, if the reasons underlying them are properly comprehended. Geography thus taught ceases to be a dry assemblage of isolated details, to be forgotten as soon as learned, and is made to appear in its true light—as a science based on principles which explain its facts and connect them in a consistent whole.

Generalization in the descriptive matter is another distinctive feature of this work. By treating together sections that are alike in their general character, distasteful repetitions are avoided and space is saved for much interesting matter. An opportunity is thus gained for so linking geographical facts with striking facts of history, natural history, ethnology, and social life, as to impress them permanently on the mind.

The prominence given to a consideration of the leading Industries, as the results of certain physical conditions, and especially to Commerce, will hardly fail to be acceptable in this practical age. The pupil is taught to what the great cities owe their growth, the main routes of travel and traffic, where and how our surplus products find a market, whence we obtain the chief articles of daily use, and the exports which the leading commercial cities contribute to the world's supply. Peculiar industries of general interest are also explained and illustrated with graphic designs; for examples, see the matter and engravings relating to silk, cotton, tea, coal, petroleum, and the industries of Europe (p. 93), Asia (p. 101), and Africa (p. 110). This information is not only of great value in itself, but will impart fresh life to the study of Geography.

The introduction of occasional references to standard books is a new feature, by which it is sought to form in both pupils and teachers a habit of reading on interesting topics. *These references are not made to supply anything that is wanting in the text, for this is complete in itself, but as guides where further information is desired.*

In culling out the most important matter for the text, an unsatisfactory meagerness has been avoided on the one hand, and cumbrousness of detail on the other. Suggestive questions requiring independent thought have been introduced from time to time. The pronunciation of difficult proper names is given where they first occur, as well as in Reference-Tables at the end. Various new and useful matters are brought before the notice of the pupil; such as the time at different places when it is noon at Washington, the successive acquisitions of territory by the United States, the system of survey adopted for our Public Lands, etc. These and other points which adapt the book to the wants of the class-room can not fail to be appreciated by the practical teacher.

Great care has been exercised to insure correctness. Recourse has been had to original authorities and to the most trustworthy statistics; the results of recent discovery have been embodied; and it is believed that both text and maps give an accurate picture of the world as it is to-day.

The Maps—the results of the best efforts of Mr. Jacob Wells as draughtsman and Messrs. Russell and Struthers as engravers—challenge comparison in point of correctness, distinctness, and artistic finish. By the ingenious device of using both black and brown lettering for the names of towns on the Sectional Maps, the important places are made to stand out clearly, and a convenient study-map is combined without confusion on the same sheet with a full reference-map. Letters are placed at intervals along the margins of these maps, and indexes of the names contained, with the letters corresponding to them, are furnished; so that any place met with in general reading may be found at once by noting where two lines running from the letters given with the name in the index would meet on the map. The Physical Maps, telling at once the whole story of relief, mineral resources, and animal and vegetable life, are, it is claimed, unequaled in usefulness, comprehensiveness, and beauty. The Commercial Map of the World and the Historical Maps will also be found of great value for reference.

The illustrations are fresh, graphic, and instructive works of art, on which the pencils of Waud, Gibson, Beard, and other eminent designers, have been employed. It may be mentioned as a proof of the value of these illustrations and of the Physical Maps, that some of their features were plagiarized even before the work was fairly in the hands of the public.

As to the use of the book a few suggestions may be in place. Let the definitions be perfectly mastered at the outset. Use the globe for purposes of illustration wherever it is possible. When a town or any natural division is mentioned at recitation, let the pupil describe its situation and point to it on a wall-map or on the globe, that a habit of constantly referring to maps may thus early be formed: to make such reference necessary, the situation of the places mentioned is for the most part omitted from the text. Recitation by topics is recommended; but questions are supplied for those who desire them, as well as for the convenience of the pupil in testing his own knowledge. Frequent reviews are desirable; for these, the questions just referred to and the Statistical Tables afford facilities (pp. 64, 76, 94, etc.); or summaries may be prepared according to the models on page 9, and topics assigned to different members of the class in turn. As a written review, require a Table to be prepared by the student, with different columns, in which, after the names of the countries that have been studied, shall be set forth in succession their boundaries, natural divisions, climate, soil, productions, exports, government, capitals, chief cities, etc.

The publishers trust that the two books which form this series may be found of material assistance to the teacher in imparting, and the pupil in acquiring, a thorough and lasting knowledge of Geography.

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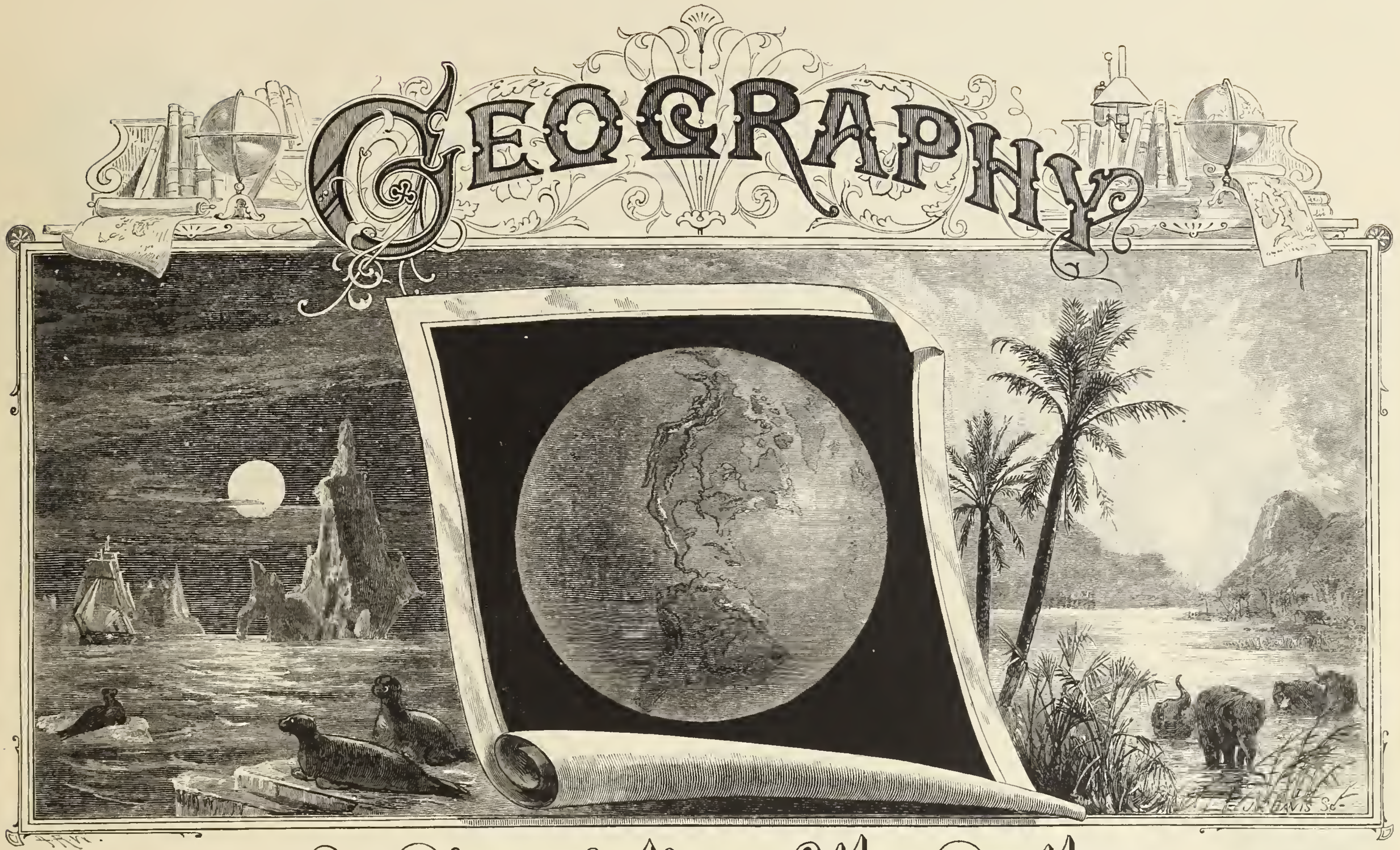
GEOGRAPHY



A Description of the Earth.

The Earth is one of many bodies that revolve around the sun. Such bodies are called Planets (*wanderers*). The earth is the planet on which we live.

The planets, on their outer crust, or *surface*, have no heat of their own ; nor do they shine with their own light. They receive their heat and light from the sun.

The sun shines with its own light. The Latin word for sun is Sol. Hence the sun and its attendant planets are said to form the *So'lar* System. The earth is a planet of the Solar System.

The moon revolves around the earth, and with the earth around the sun ; it therefore belongs to the Solar System. The light we receive from the moon is not its own, but sunlight reflected from its surface.

Geography is a description of the earth. Ge, in Greek, means *the earth ;* graph'e means *writing :* hence comes the word Geography.

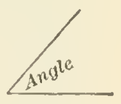
Geography deals chiefly with the earth's surface. It treats, also, of the earth as a whole and of its relations to the sun ; of the atmosphere (air) that surrounds it ; of the plants, animals, and minerals distributed through its different parts ; and of the divisions made by man, each having its industries, institutions, government, etc.

These topics are embraced in three divisions—Mathematical Geography, Physical (that is, *natural*) Geography, and Political (or *civil*) Geography.

MATHEMATICAL GEOGRAPHY.

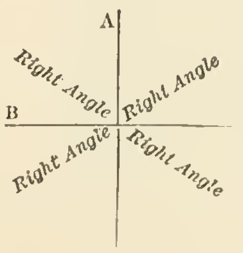
Mathematical Geography treats of the form and size of the earth, its motions and their results, the mode of determining location on its surface, and the methods of representing the earth in whole or in part.

PRELIMINARY DEFINITIONS.



An **Angle** is the difference of direction of two lines that meet.

When one line meets another so as to form two equal adjacent angles, the lines are said to be **perpendicular** to each other. The line *A* is perpendicular to the line *B*, and *B* is perpendicular to *A*.

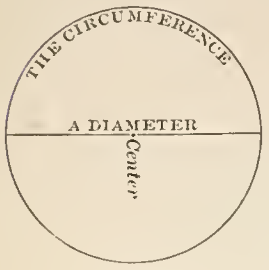


A **Right Angle** is an angle formed by two lines perpendicular to each other. Four right angles exactly fill the space round any point.

A **Circle** is a figure bounded by a line, every point of which is equally distant from a point within called the Center. (*See diagram, page 4.*)

The **Circumference** of a circle is the line that bounds it. *The circumference is itself often called a Circle.*

A **Diameter** of a circle is a straight line passing through its center and terminating at opposite points of the circumference.

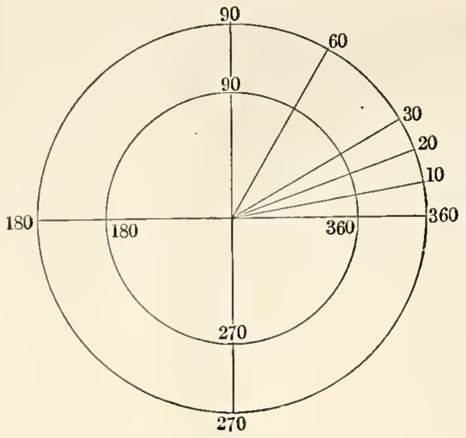


A Circle.

Degrees.—The circumference, it will be seen, subtends (that is, *extends across*) the four right angles that may be formed at the center. For convenience, the whole space occupied by these four right angles may be divided into 360 equal parts, each of which is called a **Degree** (marked °). One right angle, then, will contain one-fourth of 360, or 90, degrees.

Such a portion of the circumference as subtends an angle of 1 degree at the center, is itself also called a *degree.* In the entire circumference, therefore, there are 360 degrees.

A degree may be divided into 60 equal parts, called Minutes (′); and a minute may be subdivided into 60 equal parts, called Seconds (″). 40° 30′ 20″ is read *forty degrees, thirty minutes, and twenty seconds.*



The length of a degree of the circumference of course depends on the size of the circle; in the diagram, 90 degrees of the outer circumference are longer than 90 degrees of the inner one, though the angle subtended is the same.

A **Sphere** is a body bounded by a curved surface, every point of which is equally distant from a point within called the Center.

Half a sphere is called a **Hemisphere;** *hemi* means *half.*

A **Great Circle** of a sphere is a "circle" that divides the surface of the sphere into two equal parts. A **Small Circle** is a "circle" that divides the surface of the sphere into two unequal parts.

The word *circle* is here used with the signification of *circumference.* Find the Great Circle and the Small Circles in the first diagram on p. 6.

Note.—A globe should be constantly kept before the class for the purposes of illustration. It may here be used to show the shape of a sphere, and the difference between great and small circles.

Questions.—What is a Planet? The Earth? The Solar System? Why is the Solar System so called? What planets have you seen? How does the sun differ from the planets? What is Geography? From what is the word derived? What are the three divisions of Geography? Mention some of the subjects embraced in these divisions.

Of what does Mathematical Geography treat? What is an Angle? When are two lines said to be *perpendicular* to each other? What is a Right Angle? A Circle? The Circumference of a circle? A Diameter? What is meant by the term *degree,* when applied to an angle? When applied to a circumference? Into what may each degree be divided? Each minute? How are degrees, minutes, and seconds, marked? Write briefly *nine degrees, ten minutes, eleven seconds.* On what does the length of a degree of the circumference depend? Illustrate this with a diagram. What is a Sphere? A Hemisphere? A Great Circle? A Small Circle?

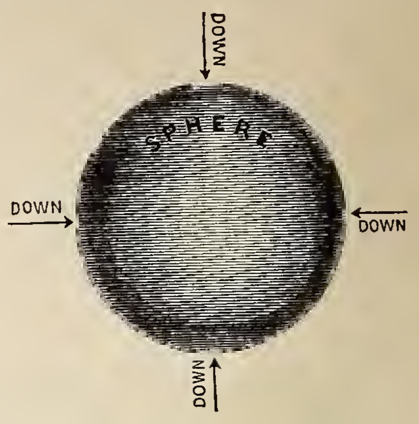
◆

I. FORM OF THE EARTH.—HORIZON.

The Earth is round, nearly like a sphere.

Instead of being a perfect sphere, the earth is slightly flattened at two opposite parts of its surface, like an orange, though in a much less degree. A figure resembling a sphere is called a **Sphe′roid.** The earth is a Spheroid.

If the earth is round, why does it look flat? Because it is very large, and the little of its surface that we can take in at one view does not show its roundness.



If the earth is round, why do not men, ships, and other objects, on the side opposite to us, fall off? Because they are attracted toward the center of the earth, just as we are. *Off* or *up* is from the center; but every object on the surface is drawn *down* or toward the center, and there is no more cause for falling off from one part than from another.

Proofs that the earth is round:

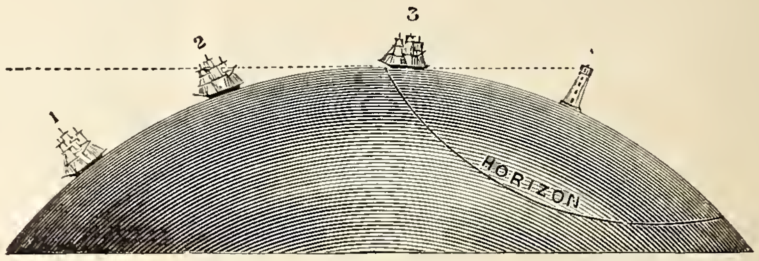
1. Men have traveled around it, keeping the same general direction, and coming back to the place from which they started. As early as 1519–1522, a Spanish vessel circumnavigated (*sailed around*) the earth.

2. The earth, when it passes between the moon and the sun in a lunar eclipse, throws on the moon a circular shadow.

3. As a ship approaches us, we see the highest part first, the lowest part being hidden by the intervening surface.

The Horizon.—In whatever direction the eye turns, there is a limit beyond which objects on the surface are shut out from view by reason of the earth's roundness. This line, which forms the circumference of a circle, we call the Hori′zon.

The **Horizon** is the line that bounds the view.



In the above figure, the horizon of an observer at A is shown. Ship 1 is wholly hidden from view; it is *below the horizon.* Of ship 2 only the tops of the masts are in sight; they are sinking below the horizon. Ship 3 is wholly visible, no surface intervening; it is *above the horizon.*

If A were higher, the dotted line from the eye would strike the surface farther from A, and the horizon would be larger. Hence we go to the roof of a house, or ascend a hill, to obtain a more extended view.

A line parallel to the horizon is said to be *horizontal;* a line perpendicular to the horizon is called *vertical.*

Questions.—What is a Sphere? A Spheroid? What is the form of the earth? How does the earth differ from a sphere? Why does the earth look flat? Why do not objects on the side opposite to us fall off? At any point of the earth's surface, what is *up?* What is *down?* Give three proofs that the earth is round.

Define the word *Horizon.* Point to the horizon. When is an object said to be *above the horizon? Below the horizon?* On what does the extent of the horizon depend? What is a Horizontal Line? A Vertical Line?

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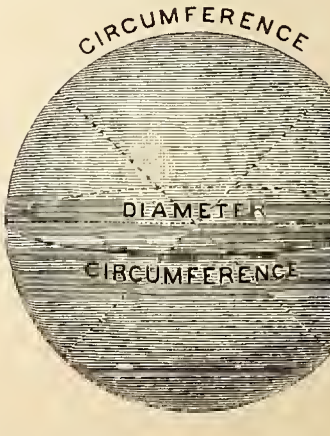
II. THE EARTH'S SIZE, AXIS, POLES, EQUATOR.



A Diameter of the earth is a straight line passing through the center and terminating at opposite points of the surface. Such a line, representing the *distance through* the earth, is nearly 8,000 miles long.

A Circumference of the earth is a curved line passing around it and dividing the surface into two equal parts. Such a line, representing the *distance around* the earth, is nearly 25,000 miles long.

The figure last given represents a transparent sphere. The dotted curve is the half-circumference on the opposite side, seen through the sphere. The dotted straight lines are diameters. Other diameters and circumferences might be drawn. If the earth were a perfect sphere, all the diameters would be equal, and all the circumferences. But the flattening causes a slight difference of length. The longest diameter is 7,925½ miles ; the shortest, 7,899 miles.

Surface.—A Square Mile is equal to a square a mile long and a mile wide. There are nearly 200,000,000 square miles in the earth's surface.

Axis.—Poles.—Equator.—The earth turns on its shortest diameter. This line is called its **Axis.**

The **Poles** of the earth are the extremities of the axis. The pole toward the north star is known as the North Pole; the opposite one, as the South Pole. In the diagram in the next column, N and S represent the poles.

The **Equator** is a great circle equally distant from the poles.

III. DIRECTION ON THE EARTH'S SURFACE.

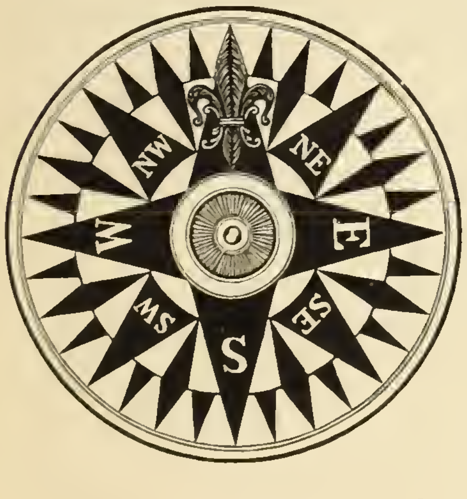
Cardinal Points.—To tell which way one place is from another, certain names of directions are necessary—North, South, East, and West. These four are called the Cardinal Points of Direction.

North is the direction along the earth's surface toward the North Pole. **South** is the opposite direction.

East is the direction in which the earth turns on its axis. **West** is the opposite direction.

The motion of the earth on its axis *from west to east* makes the sun appear to move every day round the earth *from east to west;* as, when we are looking through the window of a boat starting from a wharf, it seems as if we were stationary and the wharf were moving in the opposite direction.

Intermediate Points.—Midway between north and east is Northeast; between south and east, Southeast; between north and west, Northwest; between south and west, Southwest.



The Compass.—The card attached to the magnetic needle in the Mariner's Compass shows these points. The needle, balanced on a pivot so as to swing freely, has the property of always pointing north, or nearly so, and, carrying the card with it, determines the cardinal and the intermediate points. These known, the sailor can steer in any desired direction.

To determine the cardinal points in a general way, without the aid of the compass, face the point where the sun rises—that is *east.* Extend your arms; the right will point to the *south,* the left to the *north.* Your back is toward the *west.*

Or, face in the direction of your shadow at noon ; then you will look toward the north, your back will be toward the south, your right side toward the east, your left side toward the west.

Questions.—What is meant by a Diameter of the earth ? A Circumference ? What is the distance through the earth ? The distance around it ? How many square miles in the earth's surface ? What causes a difference in the length of the earth's diameters ? On what does the earth turn ? Define the Axis. The Poles. The North Pole. The South Pole. The Equator. Why is it necessary to have certain names of direction ? Name the Cardinal Points. What is North—South—East—West ? To what appearance does the rotation of the earth on its axis give rise ? What are the intermediate points of direction, and how is each situated ? Describe the Mariner's Compass. How can you locate the cardinal points without a compass ? Point to the north—the west—the south—the east ; to each of the intermediate points, naming it. Point to the North Pole ; to the South Pole. Extend your arm in a direction parallel to the equator.

IV. THE EARTH'S MOTIONS.

The earth has two motions—a Daily and a Yearly Motion.

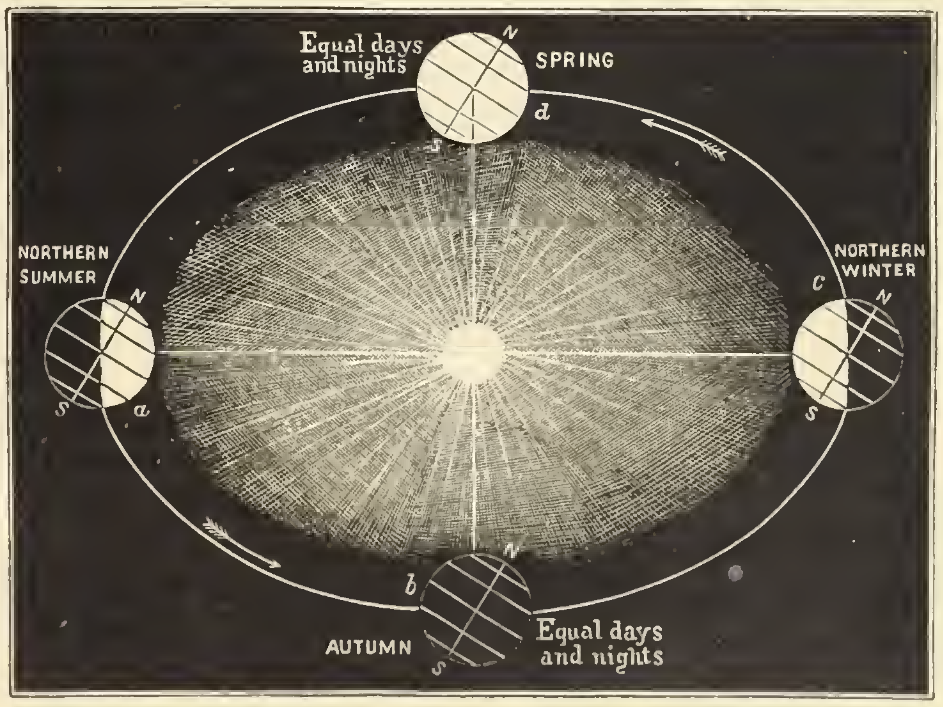
Daily (Diurnal) Motion.—The earth, as we have seen, turns on its axis. One rotation is completed in a period which we call a *day*, and divide into twenty-four hours.

But the word *day* is used in another sense, as opposed to *night.* The earth receiving its light from the sun, it is day on that half of the earth's surface which is presented to the sun; the opposite half is in darkness, or night. The earth's rotation is constantly whirling new places into the light (causing *sunrise* to them), and sweeping others into the shadow (causing *sunset*). It thus produces the **Succession of Day and Night.**

The great circle which separates the light side of the earth from the dark side, is called the **Circle of Illumination.** Trace it on the spheres in the diagram below.

Yearly (Annual) Motion.—While the earth is turning on its axis, it is also revolving in its *orbit*, or path round the sun. One revolution is completed in a period which we call a *year*, and which is equal to about 365¼ days.

Inclination of the Axis.—The earth's yearly revolution is performed with its axis *inclined to the plane of its orbit* and *always pointing in the same direction ;* to this fact is due the **Change of Seasons.** The direction in which the sun's rays strike any part of the earth's surface is constantly changed, and with it the amount of heat received; for the more nearly perpendicular the rays are, the more heat they impart.



The above diagram shows the earth at four points of its orbit. In each, the axis N S is inclined to the plane of the orbit (deviating from the perpendicular about 23½°), and points in the same direction.

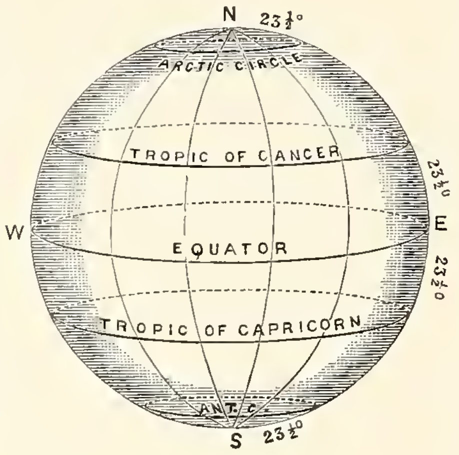
At *a*, the earth's position on June 21st, the North Pole is turned toward the sun. The inclination of the axis being 23½°, the sun's rays are now perpendicular at places on a line 23½° north of the equator ; the sun at noon is here directly overhead. This line, from the fact of the sun's appearing to turn south after reaching it, is called a Tropic (*turning-line*), and it is distinguished as the **Tropic of Cancer.** Summer now reigns in the north, winter in the south. The circle of illumination (*refer constantly to the diagram*) extends $23\frac{1}{2}$° on the opposite side of the north pole, and there fixes the position of what is called the Arctic Circle. Regions north of the Arctic Circle remain within the circle of illumination notwithstanding the rotation of the earth, and hence have a day more than 24 hours long. Regions near the South Pole are not brought within the circle of illumination by the earth's rotation, and hence have a night more than 24 hours long.

In three months the earth reaches *b* (Sept. 22d). The sun's rays are now perpendicular to the equator, and days and nights are everywhere equal ; this is the period of the northern autumn and the southern spring.

Three months more bring the earth to *c* (Dec. 21st). The conditions of the position at *a* are now reversed. The South Pole is turned toward the sun, whose rays are perpendicular to places on a line $23\frac{1}{2}$° south of the equator. The sun appears to turn north after reaching this line, and this turning-line is distinguished as the **Tropic of Cap'ricorn.** The south has its summer, the north its winter. The circle of illumination extends $23\frac{1}{2}$° on the opposite side of the South Pole, and fixes the position of what is known as the Antarctic Circle. South of the Antarctic Circle the day is more than 24 hours long, while north of the Arctic Circle the night is more than 24 hours long.

Still moving east, the earth on March 20th reaches *d*, where the light once more spreads from pole to pole, and day and night are each everywhere twelve hours long. The solar rays are now again perpendicular to the equator, and slant equally at the two tropics. Spring prevails in the north, autumn in the south.—Observe that *the southern season is always the opposite of the northern.*

The **Tropics**, then, are small circles $23\frac{1}{2}$° from the equator, being the limits beyond which the sun's rays never fall perpendicularly on the earth's surface. The Arctic and the Antarctic Circle, together called the **Polar Circles**, are $23\frac{1}{2}$° from the poles. The length of the longest day at the polar circles is 24 hours, and from these circles toward the equator it gradually diminishes to 12 hours. (*See map, p. 16.*)

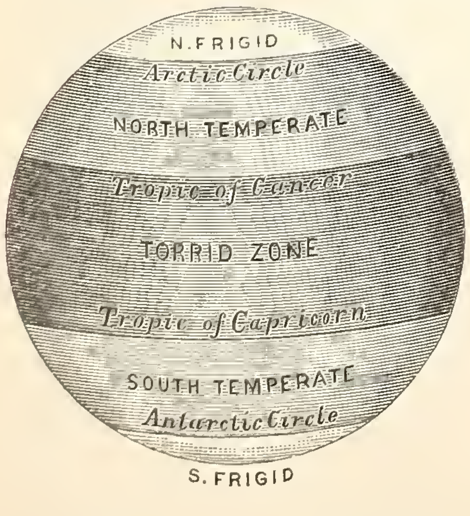


V. THE FIVE ZONES.

Zones.—The polar circles and the tropics, passing round the earth, divide its surface into five parts. These divisions are called Zones (*belts*),—three of them forming belts parallel to the equator.

Differing in temperature (for the heat diminishes in proportion to the distance from the equator), the Zones are distinguished as frigid (*frozen*), temperate, and torrid (*parched*).

The **North Frigid Zone** lies north of the Arctic Circle, from which it extends $23\frac{1}{2}$° to the North Pole.



The **North Temperate Zone** lies between the Arctic Circle and the Tropic of Cancer, and is 43° wide.

The **Torrid Zone** lies between the tropics, and is 47° wide.

The **South Temperate Zone** lies between the Tropic of Capricorn and the Antarctic Circle, and is 43° wide.

The **South Frigid Zone** lies south of the Antarctic Circle, from which it extends $23\frac{1}{2}$° to the South Pole.

Characteristics.—The zones have certain general characteristics, though in passing from one to another the difference is not immediately marked.

The Frigid Zones, receiving the sun's rays most obliquely, are extremely cold, and have but a scanty vegetation—in parts none at all. They are characterized by the longest and the shortest days and nights—fur-bearing animals—and a very sparse population, dwarfish in stature and intellect. As far as known, the South Frigid Zone is uninhabited by man.

The Temperate Zones are characterized by a moderate climate—flourishing vegetation, including important staples, the grains, potatoes, cotton, tobacco, tea, etc.—the four seasons—the smaller and less fierce animals. These zones are the principal seats of industry, and are peopled by the most cultivated nations.

The Torrid Zone, receiving the sun's rays most directly, is characterized by great heat and luxuriant vegetation—dense forests—and tropical fruits, including oranges, lemons, figs, dates, pineapples, and bananas. Among its important products are sugar, coffee, rice, cotton, and spices. It has two seasons, a wet and a dry. It contains innumerable insects, poisonous reptiles, and the largest and fiercest wild animals. Its inhabitants generally lack energy and enterprise.

Questions.—How many and what motions has the earth ? Give an account of its daily motion. How are day and night produced ? What is the Circle of Illumination ? Give an account of the earth's yearly motion. To what is the change of seasons due ? On what does the amount of heat received from the sun at any point depend ? With the aid of the diagram on p. 5, explain the earth's yearly motion and its results. What are the Tropics, and how are they determined ? What are the Polar Circles, and how are they determined ?

Into what is the earth's surface divided by the tropics and the polar circles ? Why are the Zones so called, and how are they distinguished ? Bound each zone by circles ; by zones. What are the characteristics of the Frigid Zones ? Of the Temperate Zones ? Of the Torrid Zone ? Referring to the map on p. 10, name some division of land or water in each zone.

VI. LATITUDE AND LONGITUDE.

The location of places on the earth's surface is determined by their distance from two fixed lines perpendicular to each other. The equator, running east and west, may be taken as one of the lines; and for the other, some north-and-south line extending from pole to pole and called a **Meridian.**

Latitude.—Distance north and south from the equator, measured in degrees, is called Latitude.

Divisions of latitude are marked by small circles of the earth parallel to the equator, called **Parallels.**

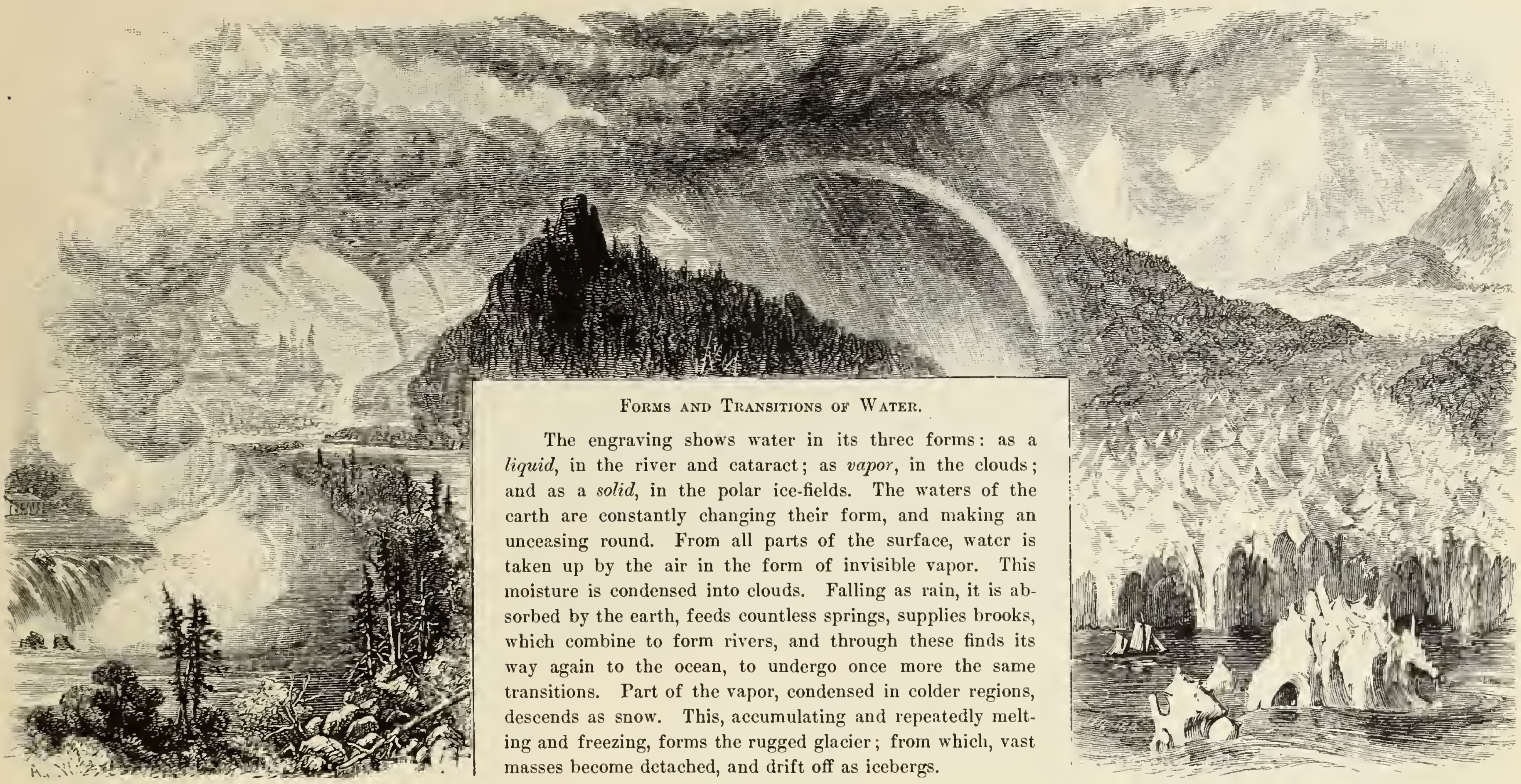
As distance north and south from the equator can extend only to the poles, the greatest latitude a place can have is 90°.—Owing to the flattening of the earth, a degree of latitude near the poles is a little longer than one near the equator. The longest degree of latitude is about $69\frac{2}{5}$ miles ; the shortest, about $68\frac{7}{10}$ miles.

Longitude.—Distance east and west from a given meridian, measured in degrees, is called Longitude.

The given meridian is called the First Meridian. The First Meridian generally taken is the meridian of Greenwich (*grin'ij*), near London, in England. In the United States, longitude is also reckoned from the meridian of Washington.

Divisions of longitude are marked by Meridians. A Meridian Circle is a great circle of the earth made up of two opposite meridians.—The greatest longitude a place can have is 180°. Why?

Degrees of longitude differ in length, being 360ths of different-sized circles. At the equator they measure about $69\frac{1}{6}$ miles.



Forms and Transitions of Water.

The engraving shows water in its three forms: as a *liquid*, in the river and cataract; as *vapor*, in the clouds; and as a *solid*, in the polar ice-fields. The waters of the earth are constantly changing their form, and making an unceasing round. From all parts of the surface, water is taken up by the air in the form of invisible vapor. This moisture is condensed into clouds. Falling as rain, it is absorbed by the earth, feeds countless springs, supplies brooks, which combine to form rivers, and through these finds its way again to the ocean, to undergo once more the same transitions. Part of the vapor, condensed in colder regions, descends as snow. This, accumulating and repeatedly melting and freezing, forms the rugged glacier; from which, vast masses become detached, and drift off as icebergs.

In other latitudes, they are as follows (*see also map, p. 16*):—

Lat. 10°, 68.12 mi.
Lat. 15°, 66.82 mi.
Lat. 20°, 65.02 mi.
Lat. 25°, 62.72 mi.
Lat. 30°, 59.95 mi.
Lat. 35°, 56.72 mi.
Lat. 40°, 53.06 mi.
Lat. 45°, 48.99 mi.
Lat. 50°, 45.55 mi.
Lat. 55°, 39.76 mi.
Lat. 60°, 34.67 mi.
Lat. 65°, 29.31 mi.
Lat. 70°, 23.73 mi.
Lat. 75°, 17.96 mi.
Lat. 80°, 12.05 mi.
Lat. 90°, 0.00 mi.

Modes of representing the Earth's Surface.—To represent the earth's surface, Globes and Maps are used. Globes represent the whole surface, in its own spherical form; Maps represent either the whole or part, and on a flat surface or *plane*.

Show parallels, meridians, the equator, the tropics, the polar circles, and the zones, on a globe. Point to them on the maps of the hemispheres, pp. 10, 11. On these maps the latitude, North or South, is marked along the circumference; the longitude from Greenwich, East or West, is shown on the equator. In the other maps the latitude appears at the sides; the longitude from Greenwich is given at the top, from Washington at the bottom.

Washington is 77° west of Greenwich. If a place is in long. 10° E. from Greenwich, what is its longitude from Washington? If a place is 3° W. of Washington, what is its longitude from Greenwich? If two places on the same meridian are respectively in 20° N. lat. and 10° S. lat., how many miles apart are they? Referring to map, p. 10, give the latitude of Cape St. Lucas. Of Rio Janeiro (*ja-ne'ro*). Give the longitude of Buenos Ayres (*bo'nos ay'riz*).

ANALYTICAL REVIEW.

Let the pupils each treat a topic, without being questioned.

The Earth: what it is.
Geography. Derivation of the word. Definition. Divisions.
Mathematical Geography.
I. Form of the earth: what it is.
  1. Proofs—three.
  2. Horizon: defined.
II. Size of the earth.
  1. Diameter: defined—length.
  2. Circumference: defined—length.
  3. Surface: extent.
III. Axis: Poles: Equator.
IV. Direction. Points. How located.
V. Motions of the earth.
  1. Daily motion: its results.
  2. Yearly motion: its results.
  3. Tropics. Polar Circles.
VI. Zones. 1. Names: boundaries. 2. Characteristics.
VII. Latitude: defined. Parallels.
VIII. Longitude: defined. Meridians.
IX. Globes and Maps.

PHYSICAL GEOGRAPHY.

Physical Geography treats of the natural divisions of land and water, the atmosphere, climate, and the distribution of plants, animals, and minerals, on the earth's surface.

Land and Water.—The 200,000,000 square miles of the earth's surface contain nearly three times as much water as land. The wonderful transitions of water are shown in the above engraving. Of the land, about three times as much lies north of the equator as south of it.

Verify this by looking at the maps of the hemispheres, pp. 10, 11. These maps should be constantly used in this lesson and the next, and may with advantage be referred to at recitation unless there is a wall-map.

I. NATURAL DIVISIONS OF LAND.

Land is distributed throughout the great body of water on the earth's surface in masses of different size, distinguished as Continents and Islands.

A **Continent** is either of the two largest divisions of land. The two continents, from their relative position, are called the Eastern and the Western Continent. Find them on the maps.

An **Island** is a body of land smaller than a continent and surrounded by water. (*Refer to illustration on p. 9.*)

The largest island, Australia, is by some classed as a continent, on account of its size; yet, as will be seen on the map, p. 11, it is much smaller than either the Eastern or the Western Continent.

Islands occur singly or in groups. An Archipelago (*ar-ke-pel'a-go*) is a group of islands, or a body of water containing such a group. Referring to the maps, name some single islands; name several groups; name an archipelago.

Divisions of Continents and Islands.—Both continents and islands may have Shores, Peninsulas, Capes, and Isthmuses—divisions distinguished by different relations to adjacent waters. They may also contain Low Plains, Plateaus, Hills, Mountains, and Valleys—divisions distinguished by differences of elevation.

A **Shore** is a strip of land bordering on a body of water. A **Coast** is a strip of land bordering on the ocean or one of its arms.

A **Peninsula** is a body of land nearly surrounded by water. The word means *almost an island.*

A **Cape** is a point of land projecting into the water. A cape is sometimes called a Point; and when high, a Promontory, Headland, or Head.

An **Isthmus** is a narrow neck connecting two larger bodies of land, and separating two bodies of water.

Show three peninsulas in the Western Hemisphere; three in the Eastern. Point to a shore; a coast. Show a cape in each hemisphere. Cape Horn is high; what might it be called? Show an isthmus in each continent. What natural division is Lower California? Madagascar? If a neck of land connected Madagascar with the mainland, what would Madagascar be? What would the neck be?

Divisions depending on Elevation.—Land may be either level or diversified with elevations and depressions.

A **Plain** is a tract of land level or nearly so. It may be low, as is generally the case near a coast, and it is then called a Low Plain. Or it may be high, forming a Plateau or Table-land.

Broad, treeless, grassy plains are known in different countries as Prairies, Llanos (*lyah'noce*), Pampas, and Steppes. Steppes generally have a coarse and scanty vegetation. Selvas are forest plains. Swamps and Marshes are wet plains. Tundras are frozen swamps. Deserts are dry, barren plains. O'ases are fertile spots in deserts.

Hills and Mountains are masses of land that rise above the surrounding country. A mountain is higher than a hill.

A **Mountain Range** or **Chain** is a connected line of mountains.

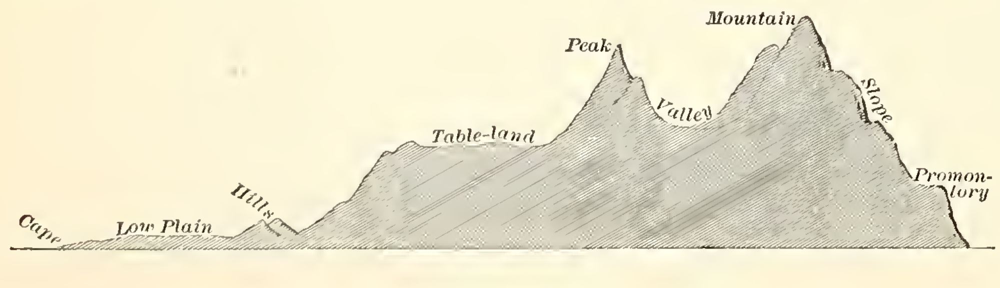
A **Mountain-System** is an assemblage of ranges running in the same general direction.

A **Volcano** is a mountain with an opening in its top or side—called a *cra'ter*—from which issue flames, smoke, ashes, and melted rock, or *la'va.* Such discharges generally occur at intervals; the volcano is then said to have an *eruption.*

A **Valley** is a tract lying between hills or mountains.

In connection with a mountain, we speak of its *summit* or top, its *slopes* or sides, its *base* or foot. A peak is a single mountain terminating in a steep, pointed summit. A Sierra (*saw*) is a range marked by a succession of peaks. A Spur is a smaller range extending at right angles, or nearly so, from a main range. A Watershed, or Divide, is a ridge of land separating the streams on one of its slopes from those on the other.

The land-divisions distinguished by differences of elevation are illustrated in the following diagram :—



Questions.—In what proportion is the earth's surface divided between land and water? How is the land distributed? What is a Continent? What are the names of the two continents? What is an Island? Name the largest island. What is Australia sometimes called? How do islands occur? What is an Archipelago? Name the land-divisions that occur in continents and islands.

Define a Shore. A Coast. A Peninsula. A Cape. What other names has a cape? Define an Isthmus. What is a Plain? How are plains distinguished? What names are given to broad, treeless plains covered with grass? What are Selvas? Swamps? Deserts? Oases? Hills and Mountains? What is a Mountain-Range? A Mountain-System? A Volcano? A Valley? Mention and define different terms used in connection with mountains. What is a Watershed?

Write a Composition, explaining the difference between a continent and an island; between a peninsula and an island; between a peninsula and a cape; between a cape and a promontory; between a prairie and a selva; between a hill and a mountain.

II. NATURAL DIVISIONS OF WATER.

The Ocean.—The continents are surrounded by a vast body of salt water, which occupies nearly three-fourths of the earth's surface. It is called the Ocean—sometimes, the Sea.

This great body of water has been divided into five parts, each of which is called an Ocean. They are known as the Atlantic, the Pacific, the Indian, the Arctic, and the Antarctic Ocean.

Ocean-Currents.—The Ocean is traversed by Currents, or vast streams which keep its waters in constant circulation.

Find the five oceans on the maps of the hemispheres, pp. 10, 11. How are ocean-currents represented on these maps? Name some currents.

Arms of the Ocean.—**Sea** and **Gulf** are terms applied to a large arm of the ocean extending into the land.

A **Bay** is either a large or a small arm of some larger body of water, extending into the land.

These terms are applied to arms of the ocean indiscriminately. Find on the map of the Eastern Hemisphere the Arabian *Sea*, the *Gulf* of Guinea, and the *Bay* of Bengal; do you see any difference in them? Find a large sea nearly inclosed by land—a gulf nearly inclosed by land—a bay in the Western Hemisphere nearly inclosed by land.

A Harbor is a small bay nearly inclosed by land, where ships may lie in safety. A Bight is an open bay. What bight do you find in the Eastern Hemisphere? A Firth (Frith) and an Estuary are small open bays at the mouths of rivers. Some small and shallow bays are called Inlets and Coves.

Water-Passages.—**Strait** and **Channel** are terms applied to a passage connecting two larger bodies of water. A **Sound** is either a shallow channel or a bay.

Inland Waters, mostly fresh, embrace lakes and rivers.

A **Lake** (in Scotland *Loch*, in Ireland *Lough*) is a body of water occupying a hollow in the surrounding land.

Lakes may have streams flowing into them, or *inlets*, and streams flowing from them, or *outlets.* Small lakes are called *Ponds.*

There are some salt lakes. These have no outlet. Pure water only is carried off by evaporation; hence the salt and other mineral matter brought into these lakes by their inlets remain there and accumulate. The saltness of the ocean is by some accounted for in the same way.

A **River** is a large stream flowing through the land. Small streams are called Rills, Rivulets, Brooks, and Creeks. Rivers flowing into another river are called its Branches, or Tributaries.

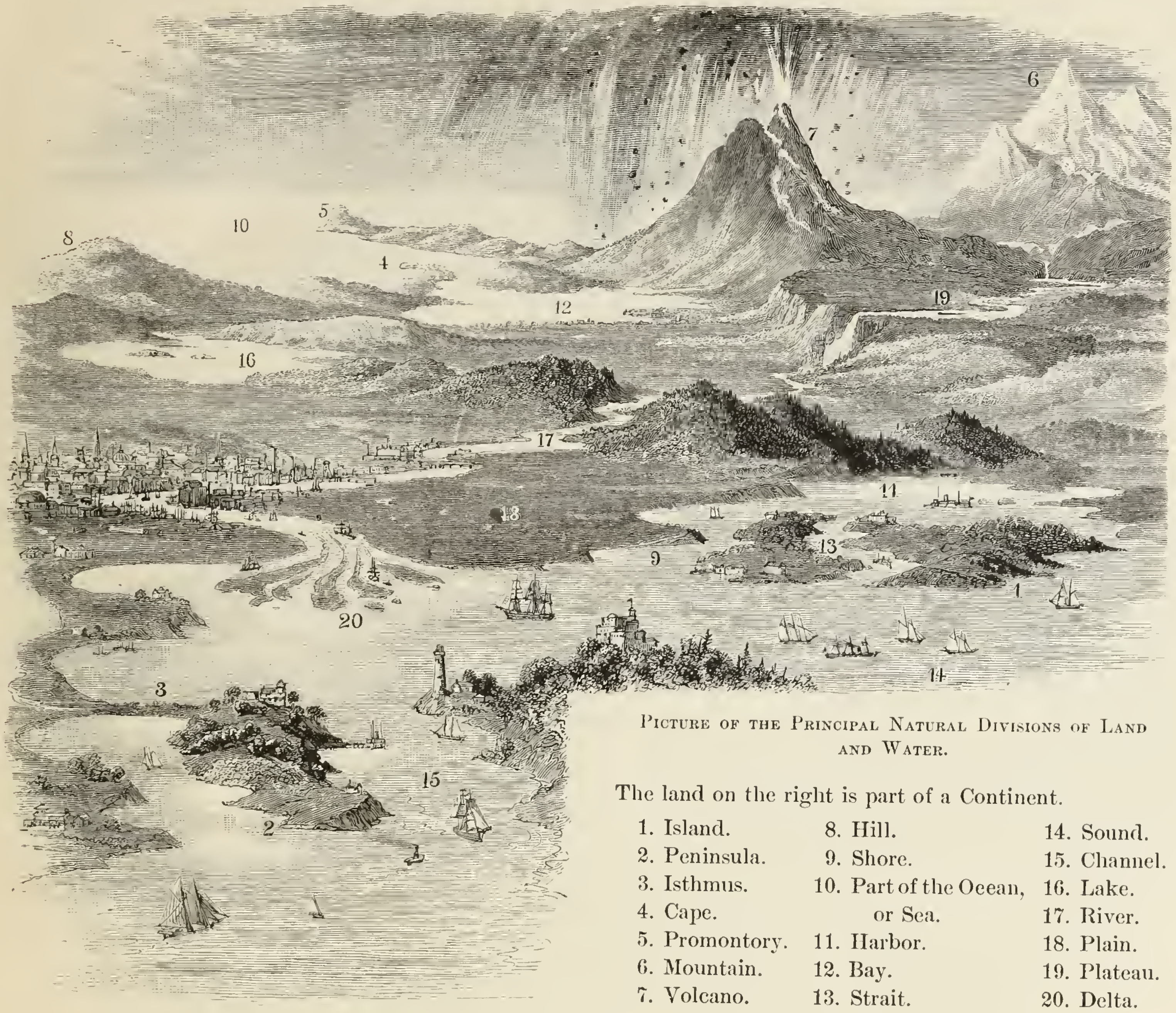
A **River-Basin** is the tract drained by a river and its branches.

A **Delta** is a tract shaped like the Greek letter delta (Δ) and included between the mouths of a river.

Some rivers rise, or have their *source*, in springs; others, in the snows of highland regions; others, again, are the outlets of lakes.

The *mouth* of a river is the opening through which it discharges its waters. Its *banks* are the strips of land that border it on either side. *Up* the river is toward its source; *down* the river is toward its mouth. The *right bank* is the bank on the right of a person going down the river; the *left bank* is the bank on his left.

A stream rushing over a high, steep mass of rock forms Falls. Great falls are called Cataracts; small ones, Cascades.



Picture of the Principal Natural Divisions of Land and Water.

The land on the right is part of a Continent.

1. Island.
2. Peninsula.
3. Isthmus.
4. Cape.
5. Promontory.
6. Mountain.
7. Volcano.
8. Hill.
9. Shore.
10. Part of the Ocean, or Sea.
11. Harbor.
12. Bay.
13. Strait.
14. Sound.
15. Channel.
16. Lake.
17. River.
18. Plain.
19. Plateau.
20. Delta.

Questions.—What is the difference between a gulf and a bay? A bight and a bay? A strait and a channel? A sound and a channel? A river and an ocean-current? A river and a brook? A lake and a pond? What divisions of water do you find connected by straits on the map, p. 10? How far west does the basin of the Mississippi River extend? What rivers on the map are represented as having deltas?

ANALYTICAL REVIEW.

Let each pupil write out the abstract. At recitation let the several divisions be defined, and examples of the more important ones be named from the maps of the hemispheres. As a further exercise, the pupils may draw on the blackboard an imaginary continent, having mountains, lakes, rivers, indentations of the coast, etc., and name the several natural divisions.

Natural Divisions of Land.

- I. Main Divisions.
  - 1. Continents.
  - 2. Islands.
- II. Subdivisions.
  - 1. *Distinguished by relations to adjacent waters.*
    - *a.* Shores.
    - *b.* Peninsulas.
    - *c.* Capes.
    - *d.* Isthmuses.
  - 2. *Distinguished by elevation.*
    - *a.* Plains.
      - Low Plains.
      - Plateaus.
      - Prairies, etc.
      - Selvas.
      - Swamps.
      - Deserts.
    - *b.* Hills.
    - *c.* Mountains.
      - Mountain-Ranges.
      - Mountain-Systems.
      - Volcanoes.
    - *d.* Valleys.
    - *e.* Watersheds.

Natural Divisions of Water.

- I. The Ocean.
  - 1. *Grand Divisions.*—Oceans.
    - *a.* The Atlantic.
    - *b.* The Pacific.
    - *c.* The Indian.
    - *d.* The Arctic.
    - *e.* The Antarctic.
  - 2. *Arms.*
    - *a.* Bodies.
      - Seas.
      - Gulfs.
      - Bays. Harbors, Bights. Firths, Estuaries.
    - *b.* Passages.
      - Straits.
      - Channels.
      - Sounds.
- II. Inland Waters.
  - 1. Springs.
  - 2. Streams.
    - *a.* Rivers.
    - *b.* Rills, Rivulets, etc.
    - *c.* Branches, Tributaries.
  - 3. Lakes.

* * *

III. THE ATMOSPHERE.

The Atmosphere is the whole body of air surrounding the earth. It extends to a height of about fifty miles, the lowest parts being the densest in consequence of the pressure of the parts above.

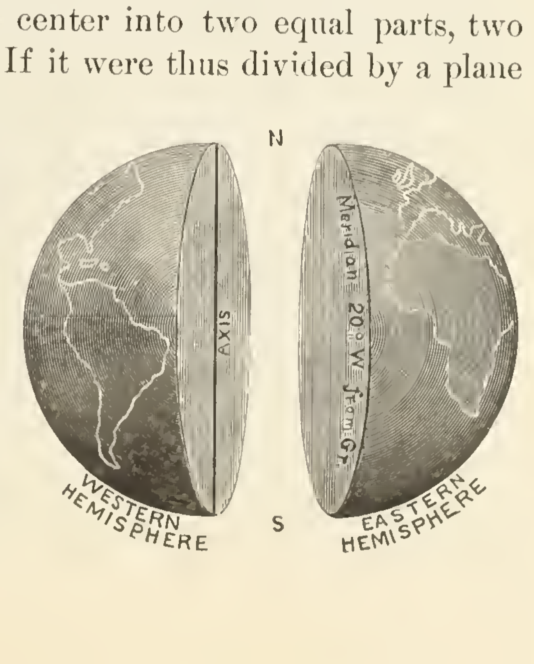
The atmosphere receives but little heat directly from the sun's rays. It is warmed mainly by radiation from the earth's surface. The lowest parts of the atmosphere are, therefore, the warmest. Persons who ascend mountains to the height of three miles find the air extremely cold even in the Torrid Zone, and so rare that breathing is difficult.

Wind is air in motion. It is to the atmosphere what a current is to the ocean. The air near the earth, being heated, is made rarer and lighter than that which is above, and rises. Other air rushes in to fill its place, and thus wind is produced.

The Trade-Winds of tropical regions are important to commerce, because sailing-vessels can take advantage of them. If the earth did not turn on its axis, these winds would blow due north and south, for currents rush from the north and south to replace the heated air constantly rising from the equatorial regions. The rapid rotary motion of points near the equator, however, makes these currents seem to have a westerly direction, and converts them into northeast and southeast winds.

Monsoons are periodical winds which blow in parts of the Torrid Zone, in one direction during half the year, and for the remaining half in the contrary direction. The change of direction is accompanied with heavy rains.

Division of the Earth into Hemispheres.—If the earth were divided through the center into two equal parts, two *hemispheres* would be formed. If it were thus divided by a plane passing through a meridian, as in the diagram, an Eastern and a Western Hemisphere would be formed. To represent its surface to the best advantage, geographers divide the earth on meridian 20° west of Greenwich. The hemispheres thus formed are represented in the maps on pp. 10, 11, which together show the entire world.



MAP QUESTIONS.

I. PARALLELS.

What part of a map is north—south—east—west? Between what points is northeast—southeast—northwest—southwest?

What is latitude? Where is the equator on these maps? What kind of a line is the equator? Why does it look like a straight line? What figure is in the margin, opposite each end of the equator? What does this mean?

Going north, we find 20 in the margin; this marks parallel 20° North. What countries does parallel 20° N. cross? What islands are in latitude 20° N.?

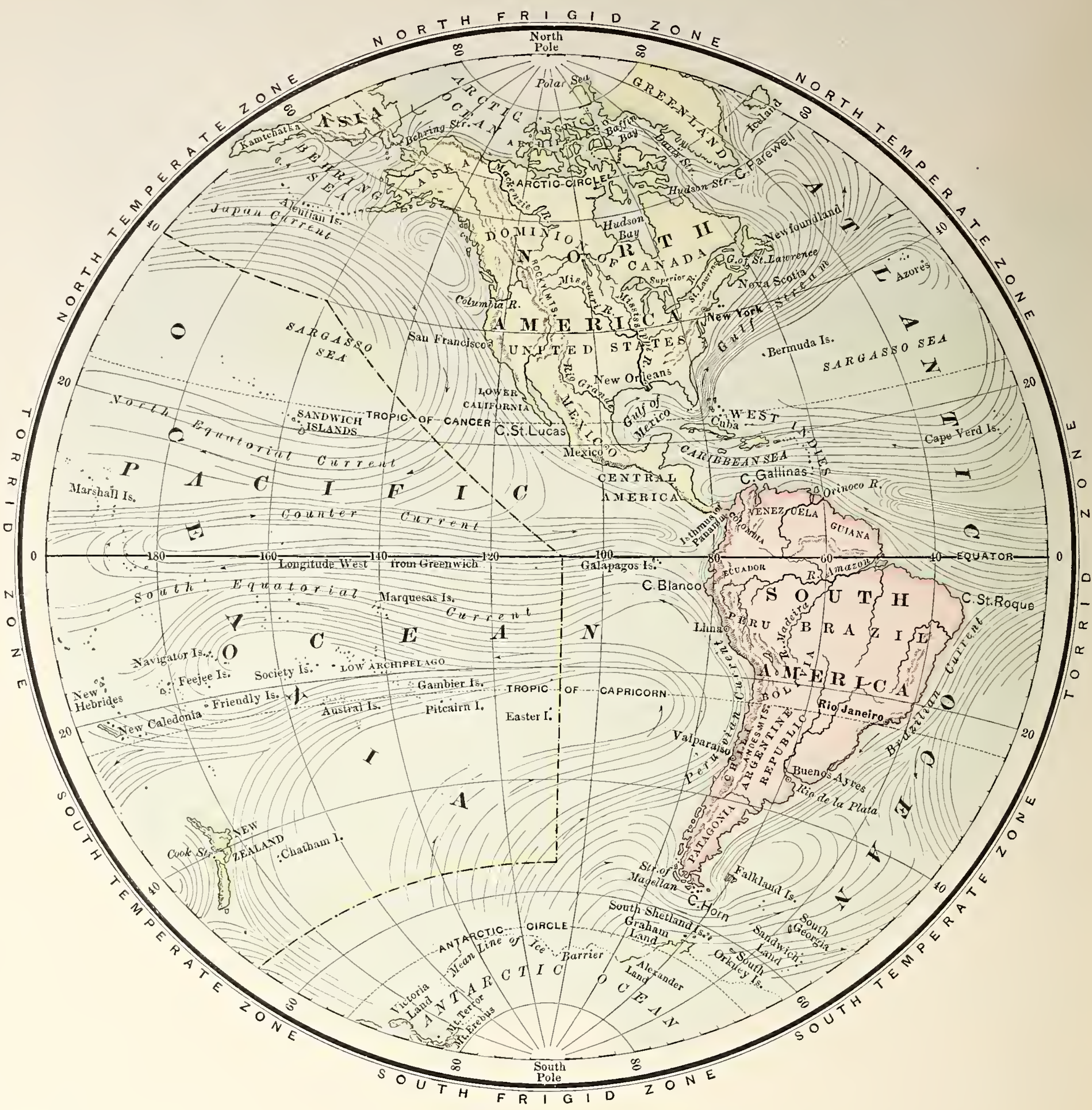
Continuing to the north, we reach a dotted line; what circle does it represent? How many degrees is the Tropic of Cancer from the equator? What tropic is as far from the equator on the south? What is the latitude of the Tropic of Capricorn?

What is the latitude of the north pole? How many degrees from the north pole is the Arctic Circle? What, then, is the latitude of the Arctic Circle? How many degrees apart are the poles?

What are the lines marked 20, 40, 60, 80, called? What kind of lines are parallels? How can you trace a parallel entirely round the earth? *By following first the half that crosses one hemisphere, then the half that crosses the other.*

All parallels have the same direction as what great circle? What direction is that? Of the parallels drawn, which represent the smallest circles? Which runs nearest to the place where you live?

THE WESTERN HEMISPHERE.



* * *

II. HOW TO DESCRIBE LAND-DIVISIONS.

Continents.—Describe the situation of the Western Continent.

The Western Continent lies in the Western Hemisphere, and is surrounded by the Arctic, Atlantic, and Pacific Oceans, and their arms.

In like manner describe the Eastern Continent.

Islands.—Describe the situation of the Aleutian (*a̤-leu'she-a̤n*) Islands. Of Greenland.

The Aleutian Islands lie west of Alaska, and are surrounded by Behring Sea and the Pacific Ocean.—Greenland lies northeast of the mainland of North America, and is surrounded by the Arctic Ocean, the Atlantic Ocean, Davis Strait, and Baffin Bay.

In like manner describe Iceland, Newfoundland (*nu'fund-land*), Cape Verd Islands, Falkland (*fawk'la̤nd*) Islands, South Shetland Islands, New Zealand, British Isles, Spitzbergen, Japan Isles, Philippine (*fil'ip-pin*) Islands, New Guinea (*ǧin'e*), Australia, Tasma'nia, Madagascar, Ceylon (*se'lon*).

Capes.—Describe the situation of Cape Farewell.

Cape Farewell projects from the southern coast of Greenland, into the Atlantic Ocean.

In like manner describe Cape Gallinas (*gal-le'na̤s*), St. Roque (*roke*), Horn, Blanco, St. Lu'cas, Bon, Guardafui (*gwar-da̤-fwe'*), Good Hope.

Isthmuses.—Describe the Isthmus of Panama (*pan-a̤-mah'*).

The Isthmus of Panama connects North America and South America, and separates the Caribbe'an Sea from the Pacific Ocean.

In like manner describe the Isthmus of Suez (*soo'ez*).

Mountain-Ranges.—Describe the Rocky Mountains.

The Rocky Mountains traverse the western part of North America from northwest to southeast.

In like manner describe the Andes, Alps, U'ral, Himalay'as, Atlas, Kong, and Mountains of the Moon.

Grand Divisions.—The Western Continent is made up of two Grand Divisions, North America and South America.

The Eastern Continent is made up of three Grand Divisions, Europe, Asia (*ay'she-a̤*), and Africa.

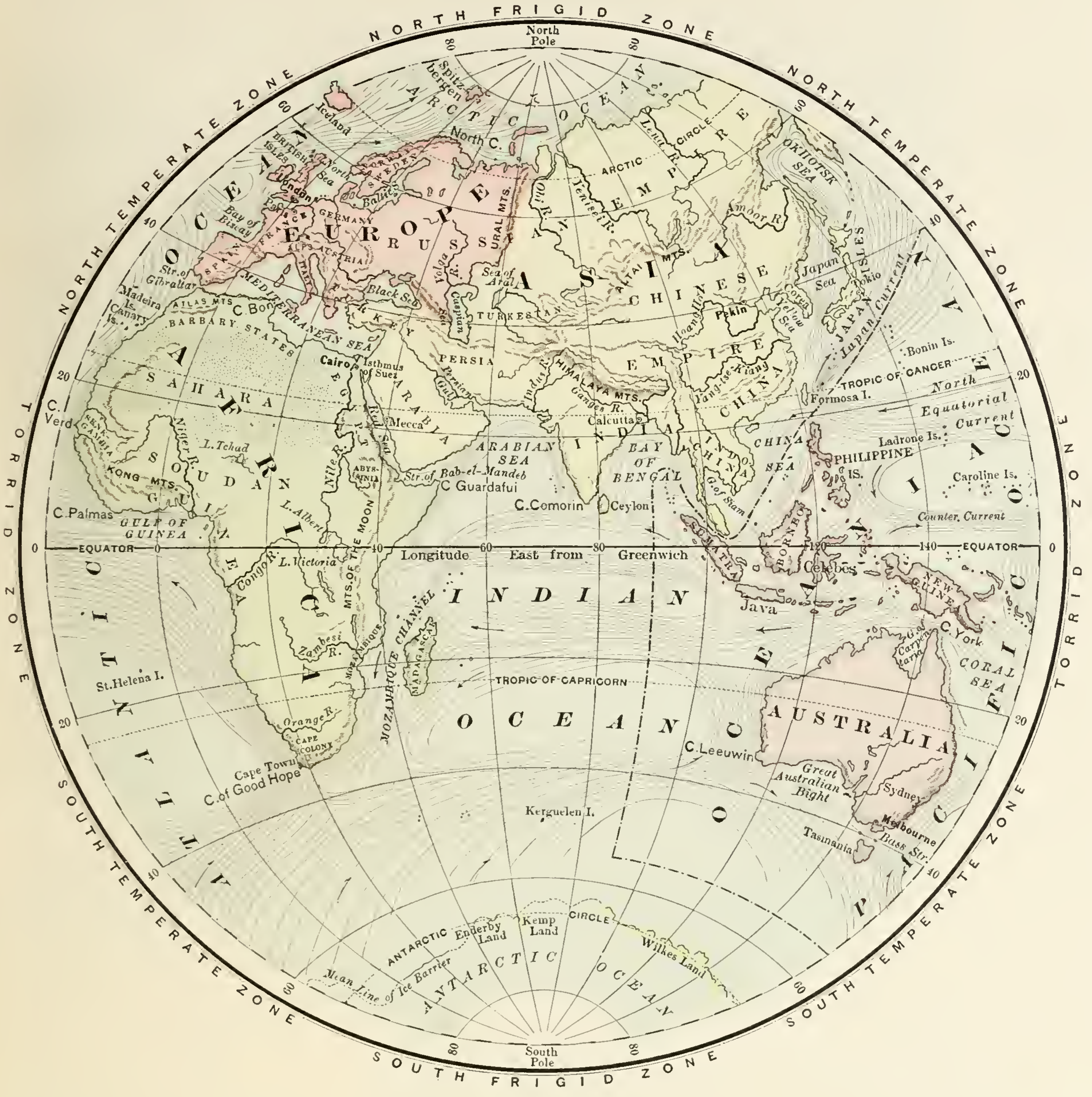
Australia, and various islands lying mostly in the Pacific Ocean, constitute a sixth Grand Division, called Oceania (*o-she-ah'ne-a̤*).

Describe the situation of North America.

North America is the northern part of the Western Continent; its shores are washed by the Arctic Ocean, the Atlantic, the Pacific, and their arms.

In like manner describe the situation of South America, Europe, Asia, and Africa.—In what part of the Eastern, and what part of the Western Hemisphere, does Oceania lie? In what oceans does it lie? Of what is it composed?

THE EASTERN HEMISPHERE.



III. MERIDIANS.

What lines meet at each pole? What is longitude? In the Eastern Hemisphere, how is the First Meridian marked on the equator?

What meridian joins the First Meridian, to make a meridian circle? What meridian falls on points of the earth opposite to those traversed by meridian 60° W.?

Where is longitude marked on these maps? What meridian forms the eastern boundary of the Western Hemisphere? The western boundary of the Western Hemisphere? The western boundary of the Eastern Hemisphere? The eastern boundary of the Eastern Hemisphere?

How many degrees of longitude are included in the Western Hemisphere? How many degrees of west longitude? What islands in the Western Hemisphere are in east longitude?

In what directions do meridians extend?

How may we find every point of the earth's surface that lies due north or south of a given point? *By following the meridian of that point north or south.*

What large island is due north of Cape Verd? Sailing due north from the mouth of the Amazon, what coast would you reach near the Arctic Circle?

A ship was wrecked in lat. 20° S., long. 40° E.; in what water was it?

Which of the meridians on the map is nearest to you? In what direction is Asia from you? In what other direction could you go, and reach Asia?

IV. HOW TO DESCRIBE WATER-DIVISIONS.

Oceans.—Describe the situation of the Atlantic Ocean. Of the Arctic.

The Atlantic Ocean lies east of the Western and west of the Eastern Continent; it borders North and South America, Europe, and Africa.

The Arctic Ocean occupies the northern part of both hemispheres; it borders North America, Europe, and Asia.

In like manner describe the Pacific, Indian, and Antarctic Oceans.

Seas, Gulfs, Bays.—Describe the situation of the Caribbean Sea.

The Caribbean Sea is an arm of the Atlantic Ocean, and indents the southeastern coast of North America.

In like manner describe Hudson Bay, Gulf of St. Lawrence, Gulf of Mexico, Behring (*beer'ing*) Sea, Baltic Sea, Mediterranean Sea, Gulf of Guinea, Red Sea, Persian Gulf, Arabian Sea, Bay of Bengal, China Sea, Yellow Sea, Japan Sea, Gulf of Carpentaria, Great Australian Bight.

Straits, Channels.—Describe the situation of Behring Strait.

Behring Strait connects Behring Sea and the Arctic Ocean, and separates Asia from North America.

In like manner describe Davis Strait, Strait of Magellan, Mozambique (*mo-zam-beek'*) Channel, Strait of Bab-el-Mandeb.

Lakes.—Describe the situation of Lake Albert.

Lake Albert is in the eastern part of Africa, and has the Nile River for its outlet.—In like manner describe the situation of Lake Victoria.

Rivers.—Describe the Mackenzie River. The Niger River.

The Mackenzie River is the outlet of lakes in the north of North America, and flows northwest into the Arctic Ocean.—The Niger River rises in the Kong Mountains, and flows northeast and then southeast, into the Gulf of Guinea.

In like manner describe the Mississippi, Missouri, St. Lawrence, Rio Grande (*re'o grahn'day*), Orinoco, Amazon, Volga, Nile, Congo, Ganges, Yang-tse-Kiang (*yang'tse-ke-ang'*), Hoang-Ho.

Currents.—Where is the Gulf Stream, and in what direction does it flow? The Japan Current? The North Equatorial Current? The South Equatorial Current? The Brazilian Current? The Peruvian Current? In what direction do currents flow from the Antarctic Ocean?

Miscellaneous Questions.—In what zones is each of the grand divisions? Describe the Sargasso Seas. *They are large tracts of ocean covered with floating seaweed.* Where are the Sargasso Seas? What Antarctic lands are in the Western Hemisphere? What two mountains are on the coast of Victoria Land? Give about the latitude and longitude of Mt. Erebus. What Antarctic lands are in the Eastern Hemisphere? Which hemisphere contains the most land? Which zone? Which continent? Which grand division? In what direction are you from the north pole? From the south pole? Is the length of twenty degrees of longitude greatest on the Antarctic Circle, the Tropic of Capricorn, or the equator? Why?

IV. CLIMATE AND WEATHER.

Climate is the prevailing condition of the atmosphere at a given place, as regards heat, moisture, and health.

Heat.—The temperature, or degree of heat, depends mainly on the latitude, being greatest near the equator. It diminishes as the elevation above sea-level increases; it is affected, also, by winds and ocean-currents, by the slope of the country, whether toward the sun or from the sun, by the character of the soil, etc.

In all latitudes there is an elevation above which the surface is covered with perpetual snow. This limit is called the Snow-line. From a height of three miles at the equator, it descends to sea-level near the poles.

Polar currents and the drifting ice they bring with them lower the temperature of the regions they traverse. On the other hand, such is the genial effect of the Gulf Stream, a broad warm current which issues from the Gulf of Mexico and crosses to the shores of northern Europe (*map, p. 10*), that barley and potatoes flourish there, while in corresponding latitudes in America the ground is covered with snow most of the year.

Moisture.—The air always contains more or less vapor, which we call *moisture.* The warmer it is, the more vapor it is capable of holding.

If, when fully charged with vapor, the air is suddenly cooled, part of the vapor is thrown off. The *precipitation*, as it is called, may be in the form of minute particles floating in the air, constituting *fog* or *mist*—or of drops, forming *rain.* The vapor, before condensing into drops, may be frozen in the upper air into *snow;* or the drops, after being formed, may be frozen into *hail.*

Rain.—The quantity of rain that falls annually at a given place differs little in different years, but the rainfall varies greatly in different places. This will appear from an inspection of the map at the top of the page.

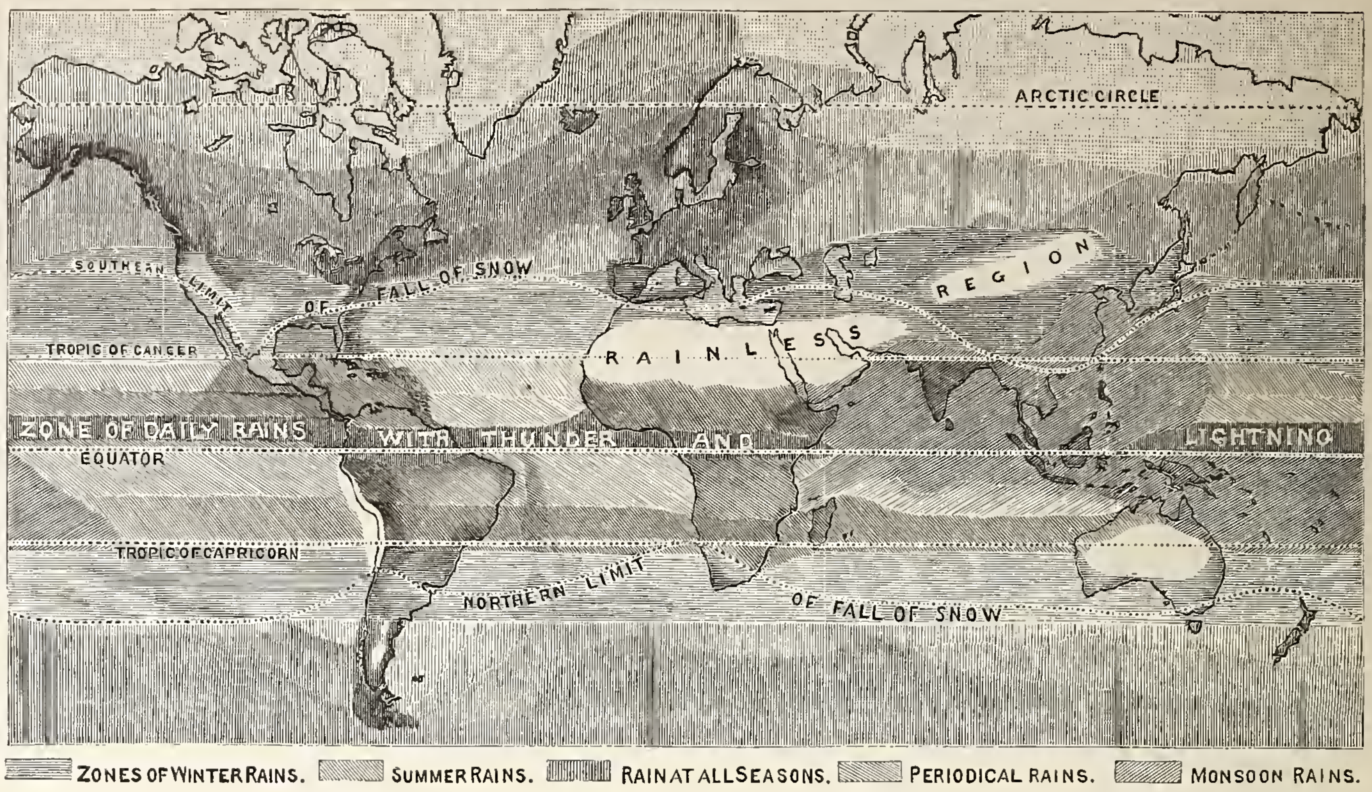
Equatorial regions, as a rule, have more rain than the temperate and the frigid zones, because their greater heat produces more evaporation from the water-surfaces.

Tropical Rains and Seasons.—There is a Zone of Equatorial Daily Rains, 1,000 miles wide, which moves with the sun from one tropic to the other. Throughout this zone there is heavy rain accompanied with thunder and lightning every afternoon. Most parts of the Torrid Zone, being included once each year within this movable zone, have one wet season, followed by a dry season of longer duration. But places within 10° of the equator, falling twice within this zone, as it crosses and recrosses every year with the sun, have two wet and two dry seasons.

Weather Observations.—The study of the weather is now reduced to a science. Observations of the temperature, the moisture and density of the air, the velocity and direction of the wind, etc., are simultaneously taken at different points in Europe and at various stations of the "Signal Service" in our own country. From reports of these, telegraphed to Washington, charts are constructed, from which the "weather probabilities" for twenty-four hours to come are announced throughout the country in telegraphic bulletins. These bulletins are valuable to the farmer as guides in his operations; while the cautionary signals of approaching storms, displayed on the lakes and the Atlantic seaboard, are of still greater service to the sailor. Even on the coasts of Europe, vessels have been saved from disaster by telegraphic predictions from the United States.

RAIN-MAP.

The depth of shading is proportioned to the rainfall.



Questions.—Define the Atmosphere. What is its extent? How is the atmosphere warmed? What is Wind? How is wind produced? What makes the Trade-Winds important? In what directions do they blow? Account for this. What are Monsoons?

Define Climate. As regards heat, on what does the climate of a place mainly depend? What is meant by the Snow-line? What is its height? State and illustrate the effect of ocean-currents on climate.

What does the air always contain? To what is its capacity for holding moisture proportioned? How are fog, rain, snow, and hail, produced? Compare the equatorial regions with the temperate and the frigid zones, as regards rainfall. Describe the Zone of Equatorial Daily Rains. Give an account of the tropical seasons. How are the "weather probabilities" arrived at, and of what practical value is their daily announcement?

(*See Rain-Map.*) What parts of each Grand Division have the most rain? Where are rainless regions found? Describe the rainfall in the region where you live.

V. THE VEGETABLE KINGDOM.

Group of Grains.

Plants.—The Vegetable Kingdom embraces the plants of different countries. Plants have life dependent on organs—roots, stems, leaves—and thus differ from *inorganic* matter like rocks and metals.

Uses.—Plants are necessary to man's existence. Besides supporting the lower animals, many species furnish man himself directly with food; as, the grains with their seeds, the potato with its tubers, the ma'nioc with its root, the banana with its fruit, etc. Others yield beverages; as tea, coffee, and caca'o, from the seeds of which chocolate is prepared.

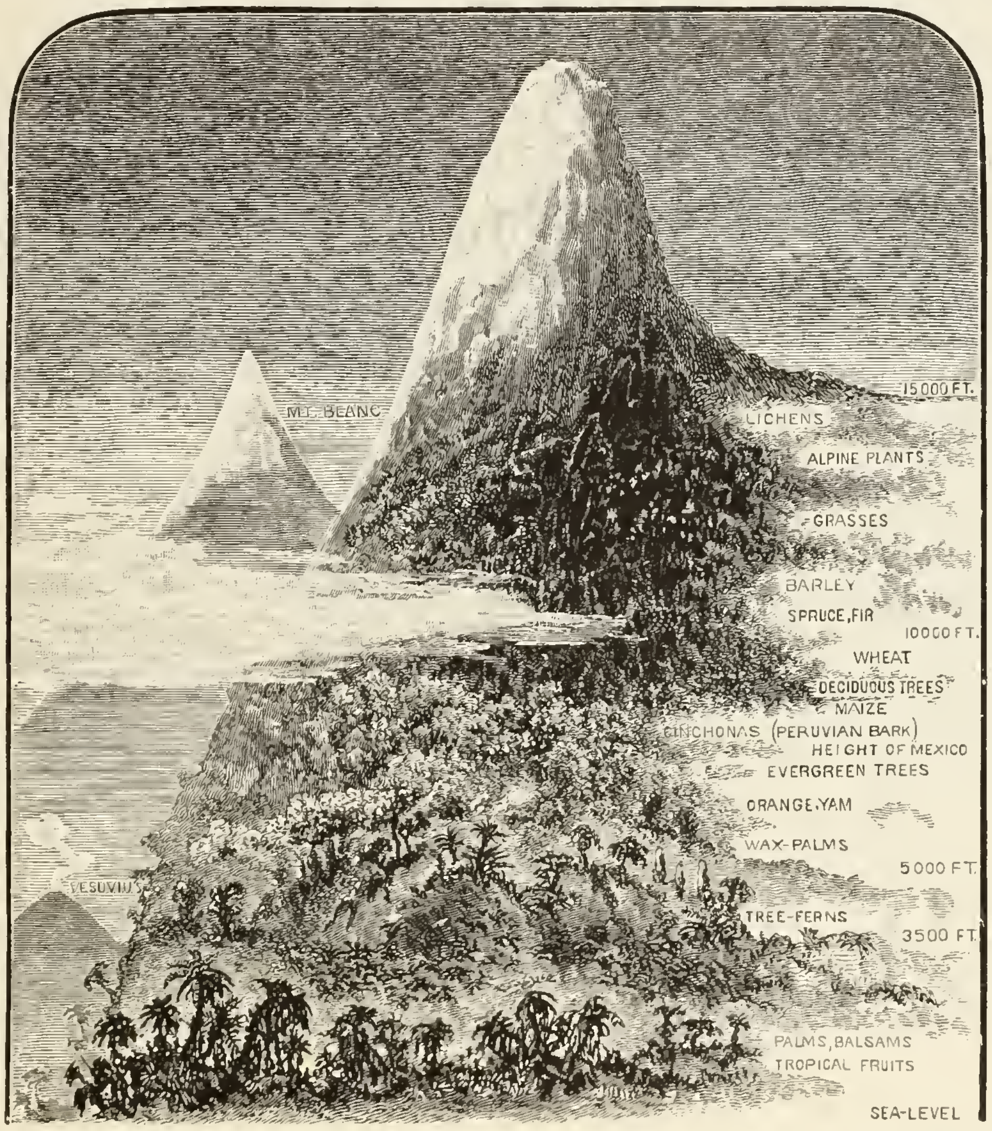
A third class supply fibers,

from which materials for clothing, etc., are made; as cotton, flax, hemp, jute. Others, again, furnish drugs, gums, oils, dyes, spices, and wood for building and manufacturing purposes. Of more than 200,000 species of plants supposed to exist, about 4,000 are cultivated for their products.

Requisites for Vegetable Growth.—Heat and moisture are essential to vegetable life. As the Torrid Zone has the most heat and moisture, it has also the most luxuriant vegetation.

Distribution of Plants.—The vegetation of different regions depends to some extent on the soil and other conditions, but mainly on the climate.

Tropical regions are characterized by enormous creeping plants, the useful palm, spice-trees, the bamboo, the India-rubber tree, the bread-fruit of Oceania, the banyan of the East Indies, the orchids (*or'kids*) feeding solely on air, and tree-ferns with their long branchless trunks crowned with immense tufts of leaves.



Vegetation at Different Heights on the Andes, near the Equator.

The cactus, indigo, cotton, coffee, sugar-cane, rice, millet, and tropical fruits, flourish in the Torrid Zone and in the regions adjacent to it.

As we leave the tropics, the rich distinctive forest vegetation of the Torrid Zone, green throughout the year, gradually gives way to a less luxuriant growth. Soon trees that shed their leaves in autumn (called *deciduous*) prevail.

Tropical fruits at first grow side by side with the grape and olive, but as we reach cooler regions are replaced by the apple, plum, and cherry. Cotton and sugar-cane are still cultivated, but are gradually superseded by tea, tobacco, hemp, and flax.

Rice, maize, wheat, buckwheat, rye, oats, barley, is the general order of grains, as we go to higher latitudes. The potato has a wide range, extending into the colder parts of the temperate zones. Here the oak, beech, maple, ash, and elm, mingle with cone-bearing evergreens, the pine, hemlock, cedar, and spruce. At last few forest-trees are found save the hardier pines, the trailing cedar, the birch, fir, and willow.

Turf-grasses, mosses, and li'chens, mark the extreme regions of vegetable life.

Plant-life at Different Heights.—As elevation above sea-level modifies heat, so it affects vegetation. If we ascended a tropical mountain to a height of 15,000 feet, we should have a succession of climates and plant-belts similar to those met with in going from the equator to the Arctic Regions. The engraving above illustrates the difference of vegetation at different heights.

Questions.—What is meant by the vegetation of a country? How do plants differ from inorganic matter? State some of the uses of plants. How many species are supposed to exist? How many species are cultivated? What are essential to vegetable life? How do you account for the luxuriant vegetation of the Torrid Zone?

On what does the vegetation of different regions depend? By what are tropical regions characterized? Where are cotton, coffee, sugar-cane, and rice, produced? As we leave the tropics, what changes are observable in vegetation? In fruits? What is the general order of grains, as we go to higher latitudes? What is said of the range of the potato? What trees are found in the higher latitudes? What is the effect of elevation on plant-life? What have you ever observed in proof of this? Name the principal forest-trees and cultivated products of your neighborhood.

VI. THE ANIMAL KINGDOM.

Animals, like plants, have organs (the heart, the center of circulation—the stomach, the seat of digestion—the lungs, etc.), and life dependent on them; but it is a higher kind of life, accompanied with sensation and the power of voluntary motion. Some animals feed directly on plants; others prey on weaker animals that feed on plants or their products: all depend ultimately on the vegetable kingdom for their support. In tropical regions, where vegetation is most luxuriant, animal life is most abundant.

Usefulness.—The inferior animals promote the comfort of man in various ways. Some save him labor by carrying and dragging loads, and doing different kinds of work. The flesh of others is used for food, and as such is particularly valuable in cold regions.

The wool of the sheep and the alpaca is woven into cloth. Silk is made of the thread of the silkworm. The furs of some animals are worn as clothing; the hides of others are tanned, or converted into leather. Besides these, we have a great variety of useful animal products—milk, and the butter and cheese made from it, oil, ivory, bone, feathers, hair, etc.

Geographical Distribution.—Animals, like plants, are specially adapted to certain conditions of climate and food, which regulate their distribution over the earth's surface. Some have a wide range. Others have flourished, when carried from one region to another quite different as regards heat and moisture. Yet generally each does best in its own *habitat*, or natural abode, or in countries of similar climate.

As we reach the several Grand Divisions, their animals will be shown. As a general rule, the hottest regions are the abode of the largest, strongest, and fiercest beasts, the most venomous serpents, the brightest-hued birds and insects. The largest water-animals—the whale, walrus, and seal—frequent the colder seas. The domestic animals thrive best in the temperate zones.

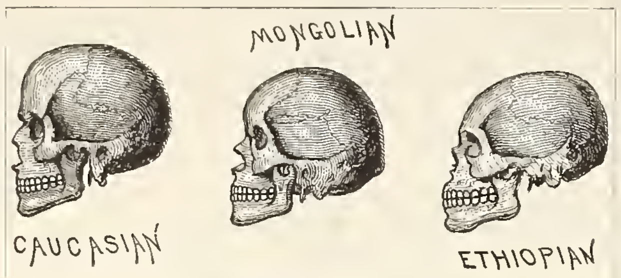
Consult Packard's "Zoölogy," p. 658.

VII. MAN.

Man stands at the head of the animal kingdom. Being able to endure extremes of climate, he is not, like the lower animals, confined to particular regions. He is more or less affected, however, by his surroundings, and attains the highest development in temperate climates. Within the tropics, his wants are so easily supplied that he lacks stimulus to exertion; while in the polar regions, his life is spent in a constant struggle for food and clothing.

Classification into Races.—The human family is supposed to number about 1,440 millions. It has been divided into five races, distinguished by color, the shape of the skull, etc. :—

1. The Cauca′sian, so called from the Cau′casus, between the Black and the Caspian Sea, noted for the beauty of its people. Complexion fair, in hot regions swarthy; forehead, full; hair, soft; beard, heavy. Distributed through southwestern Asia, nearly all of Europe, a great part of America, the coasts of Australia, northern and southern Africa. Number, about 600 millions.



Different Skulls Compared.

This is the most intellectual and civilized race, and embraces the leading nations of the earth.

2. The Mongolian.—Complexion, yellowish; face, flat; cheekbones, prominent; eyes, narrow and obliquely set; hair, coarse, straight, and black. Found in most parts of Asia, in Arctic America, and in northeastern Europe. Number, about 589 millions. The Chinese and Japanese are types of this race.

3. The Ethiopian, or Negro.—Black or nearly so; forehead, receding; nose, flat; lips, thick; jaw-bones, prominent; hair, black and woolly; beard, thin. Abode, the whole of Africa except the parts mentioned above. Number, about 185 millions.

4. The Malay.—Different shades of brown; head, narrow; forehead, low and broad; mouth, large; hair and beard, abundant, black and curly. Distributed through the Malay Peninsula in Asia, and the islands of Oceania. Number, about 55 millions.

5. The American.—Copper-colored; face, broad with strongly-marked features; forehead, low; cheek-bones, high; hair, straight, coarse, and black; beard, scanty. To this race belong the native tribes of North and South America, except those of the Arctic coasts. Number, about 11 millions.

Persian Woman.
Greek Woman.
Afghan.
Anglo-Norman.
Arab.
Moor.

Types of the Caucasian Race.

Note.—The classification given above is the old one of Blumenbach. Different classifications, embracing numerous divisions and subdivisions, have been suggested by recent scientific writers, but no one of these has come into general use. For one of the latest, *consult Peschel's "Races of Man," p. 321.*

Questions.—How does animal life compare with vegetable life? Show how the animal kingdom is dependent on the vegetable. In what ways are animals useful to man? By what is the distribution of animals over the earth's surface regulated? Of what are the hottest regions the abode? Of what, the colder seas? Where do the domestic animals thrive best? As regards geographical distribution, how does man differ from the lower animals? Where does he attain the highest development? What is the population of the world? Into how many races may the human family be divided? On what is the division based? Name the five races. State the characteristics, the abode, and the number of each.

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VIII. THE MINERAL KINGDOM.

Minerals consist of inorganic matter; the rocks, earths, etc., are minerals. As they have no life, their distribution is independent of climate. The most valuable minerals are the following:—

The Metals, forty-nine in number, marked by a peculiar luster.

The Precious Metals are gold and silver. They are often associated with each other, and occur in the rocks of mountain-slopes. Gold is also found in the sandy beds of rivers, to which it has been washed down as rocks on higher levels have crumbled away.

Of all the metals, iron is the most widely distributed. Other important metals are lead, copper, tin, zinc, plat′inum, and quicksilver or mercury (the only liquid metal). With the exception of platinum, they are usually found in union with other substances, in *ores.*

Precious Stones: the diamond, ruby, emerald, sapphire, etc. The diamond is the most valuable of gems and the hardest of known substances. It is generally found in gravelly or sandy deposits, from which it is obtained by washing.

Coal, mineral fuel formed from the vegetable matter of a bygone age. Anthracite, or hard coal, is dense and heavy; bituminous, or soft coal, is lighter and burns with flame. Coal is very widely distributed, the beds of the United States being especially large and rich. It is all-important in the useful arts—for the smelting of iron, the generation of steam to move machinery, etc.

Petroleum, or rock-oil, generally obtained by boring into the earth, but sometimes found issuing from the surface in springs. Kerosene, used for burning in lamps, oiling machinery, etc., is made from petroleum.

Building-stones; such as marble, granite, and sandstone.

Clay, used for making bricks, drain-pipes, crockery, vases, etc. Ka′olin, from which China-ware is manufactured, is a fine kind of white clay.

Review.—The following topics may be treated by the pupils orally or in writing, or may be amplified by the teacher in familiar conversations with the class:—

The Three Kingdoms.	Vegetable.	*Plants.*	Wild. Cultivated.
	Animal.	*Lower animals.* *Man.*	
	Mineral.	*Metals.* *Precious Stones.* *Coal.* *Petroleum.* *Rocks:* Marble, granite, building-stones *Earths:* Clay, etc.	

POLITICAL GEOGRAPHY.

Political Geography treats of the earth as divided by man into different countries; also, of its inhabitants as regards their occupations, social condition, religion, and government.

Occupations.—The chief occupations, or industrial pursuits, by means of which men provide for their wants, are as follows:—

Agriculture, or tilling the soil. Connected with this is Stock-raising, or the rearing of horses, mules, cattle, sheep, and hogs. Dairying is that branch of farming which has in view the production of milk, butter, or cheese.

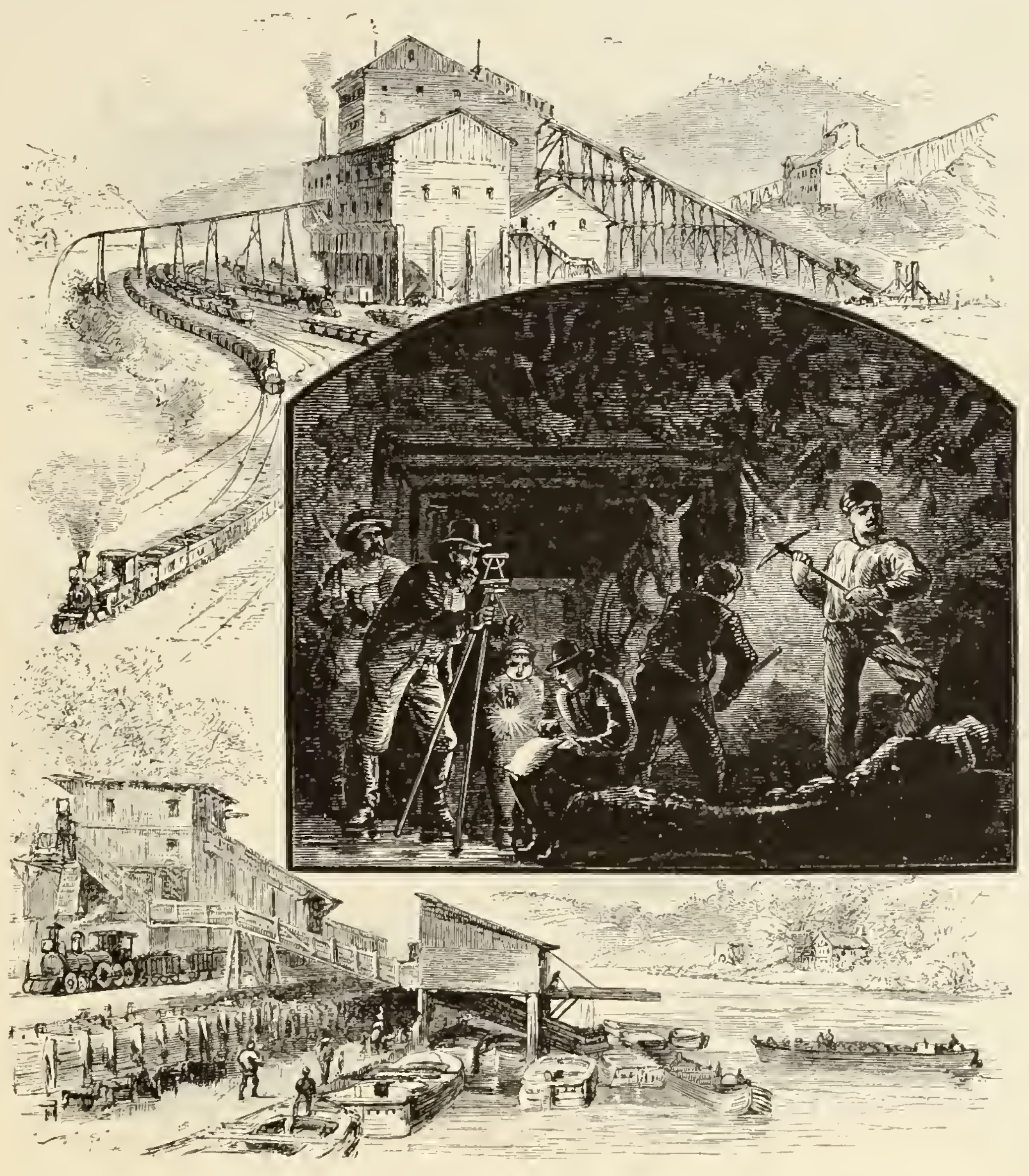
Manufacturing, or the making of useful articles from raw materials by hand or machinery.

Commerce, which consists in the exchange, or purchase and sale, of commodities.

Mining, or digging into the earth for coal, metallic ores, or precious stones. Getting out stone is called Quarrying.

Lumbering, which consists in cutting down trees in forests and taking the logs to market.

Fishing, Hunting, and Trapping.



Coal-Mining.

In the center of the engraving we have miners at work with their picks on a seam of coal, and an engineer running a level. The coal is dragged to the mouth of the mine in cars by mules; and thence, by a stationary engine, up an inclined plane to the breaker shown at the top of the engraving. Here it is broken, and distributed through grates of different sizes into pockets, boys picking out the slate as it passes down. From the pockets it is dumped into cars. The process of shipping in canal-boats is shown below.

Commerce is called *Domestic*, if it is carried on between parts of the same country; *Foreign*, if carried on between different countries. Produce or goods brought into a country are called *Imports;* those sent out are *Exports*. Transportation is the business of carrying commodities (called *freight*) from one place to another.

The chief fisheries are those of the whale, seal, cod, herring, salmon, and mackerel. The capture of fur-bearing animals is the special object of the trapper.

Social Condition.—Four grades of social condition are recognized:—

1. Enterprising and industrious nations, acquainted with the improvements of life, provided with schools, and proficient in the arts and sciences, are called Civilized.

2. Nations less advanced in these respects and less progressive, yet having a written language, a regard for education, and considerable skill in agriculture and manufactures, are distinguished as Half-civilized.

3. Nations that have no settled abodes, schools, or books, that pay little attention to agriculture or manufactures, and live mainly on the products of their herds and flocks, are known as Barbarous.

4. Tribes ignorant, degraded, fierce and cruel, destitute of laws, and subsisting wretchedly on forest products or by hunting and fishing, are classed as Savage.

Religions.—All nations, except perhaps the lowest savages, have some religion—that is, some faith in a Higher Power and some system of worship. The different religious systems are embraced under four heads:—

1. The Christian, which acknowledges one God, the Bible as his revealed word, and Jesus Christ (whence the name *Christian*) as the Son of God and the promised Messiah. This faith prevails among civilized nations, and numbers about 395,000,000 followers.

2. The Jewish, which acknowledges one God, and the Old Testament as his word, but rejects Christ. There are about 7,000,000 Jews, scattered mostly among civilized nations.

3. The Mohammedan, which acknowledges one God, and Christ as a prophet, but believes in Mohammed as the last and greatest prophet. For the Bible it substitutes the Koran, containing the revelations which Mohammed claimed to have received from Heaven.—(*Consult Washington Irving's "Mahomet," p. 345.*)

This faith has about 232,000,000 followers, including many half-civilized nations in Asia and northern Africa.

4. The Pagan.—This appears in different forms, all of which substitute false gods—and often idols of wood and stone—for the God of the Bible. More than half the inhabitants of the earth are Pagans.

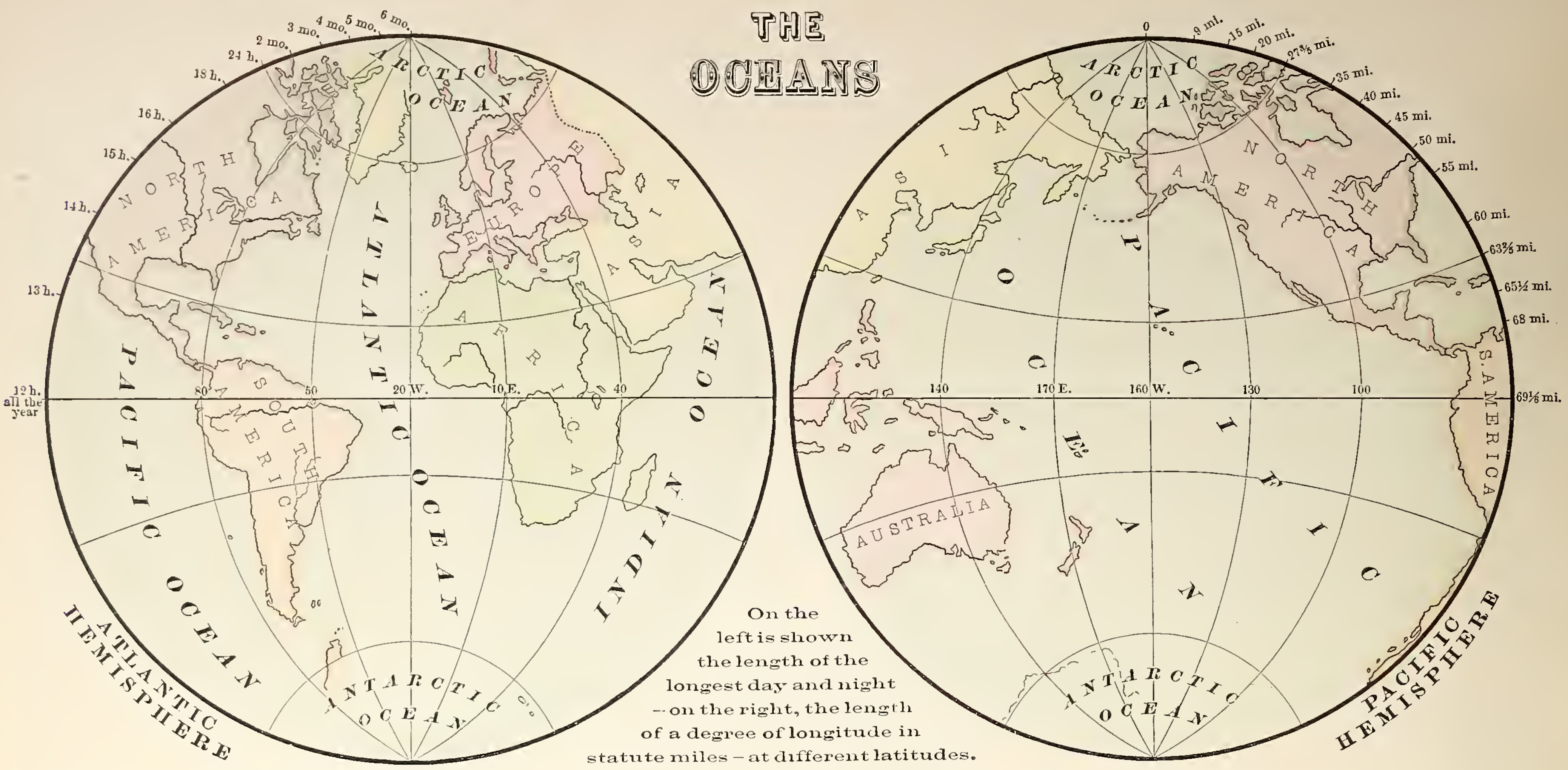
The Christian faith embraces over 201,000,000 Catholics, 110,000,000 Protestants, and 78,000,000 followers of the Greek Church. —Mohammed first established his religion about 625 A. D. in Arabia, whence it was spread by the sword over the neighboring countries.

Government is that system according to which a country is ruled. Savage and barbarous tribes either have no government at all, or are ruled by chiefs whose will is law. Among civilized and half-civilized nations the prevailing forms of government are the Monarchy and the Republic.

A **Monarchy** is a government in which the highest power is held by one person for life.

Kinds.—Monarchies are called *Hereditary*, when the power descends from father to son; *Elective*, when the monarch is chosen by some body of electors. There are also *Absolute* monarchies, or *Despotisms*, in which the monarch's power is unrestrained,—and *Limited* or *Constitutional* monarchies, in which his power is restricted by a constitution or laws. In the Eastern Continent, the governments are mostly monarchies; limited, if the people are civilized—absolute, if they are not.

Names.—Monarchies and their rulers have certain specific names. A Kingdom is a monarchy under a King (or, if the sovereign is a woman, a Queen). An Empire is a monarchy (usually large or composed of different states) under an Emperor or Empress. The Emperor of Russia is called *Czar*. The Prince rules a Principality; the Duke, a Duchy; the Grand Duke, a Grand Duchy; the Elector, an Electorate.



THE OCEANS

On the left is shown the length of the longest day and night —on the right, the length of a degree of longitude in statute miles—at different latitudes.

A **Republic** is a government in which the laws are made and executed by persons elected by the people. The chief officer of a republic is a President. Most of the countries of the Western Continent are republics.

The Divisions of countries or states are variously known as Counties, Shires, Districts, Provinces, and Departments.

A **Town** is a collection of houses and inhabitants.

A **City** is a town which is incorporated; that is, invested by law with certain rights and privileges. A city is usually governed by a Mayor and Aldermen.

A **Seaport** is a place on or near the sea, having a harbor that can accommodate vessels.

The **Capital** of a country is its seat of government, the place where the laws are made and the chief officer of the nation resides. The **Metropolis** is the largest city.

Questions.—Of what does Political Geography treat? Name the leading industrial pursuits. What is Agriculture? Stock-raising? Dairying? Manufacturing? Commerce? Mining? Lumbering? What is the difference between Domestic and Foreign Commerce? What are Imports? Exports? What is Transportation? What are the chief fisheries? How many grades of social condition are recognized? Name and describe each.

Name and define the four religions. How many followers has each? Which prevails among civilized nations? What nations are included among the Mohammedans? What religion prevails among savage tribes? Name the three leading divisions of Christians.

What is Government? What are the two principal forms of government? What is a Monarchy? Define the different kinds of monarchy. By what specific names are monarchies and their rulers known? What is a Republic? What are the leading divisions of countries called? What is a Town? A City? A Seaport? The Capital of a country? The Metropolis?

Seals and Penguins in the Antarctic Regions.

MAP QUESTIONS ON THE OCEANS.

What ocean surrounds the North Pole? The South Pole? What oceans lie between the Arctic and the Antarctic Ocean?

What circle forms the boundary between the Arctic Ocean and the Atlantic? Between the Antarctic and the Atlantic? Between the Pacific and the Antarctic? Between the Indian and the Antarctic?

In what part is the Atlantic Ocean narrowest? In what, widest? Where is the Pacific Ocean narrowest? Where, widest? Which is the largest ocean?

Compare the eastern Atlantic coast with the western; what do you observe with respect to their relative shape? If the continents were brought together, into what would the easterly projection in the north of North America fit? Where would the westerly projection in the north of Africa fit?

What is the length of the longest day at the equator? At the Arctic Circle? How long is a degree of longitude at the equator? At the Tropic of Cancer? At the Arctic Circle?—Referring to the maps on pp. 10, 11, name the Antarctic lands.

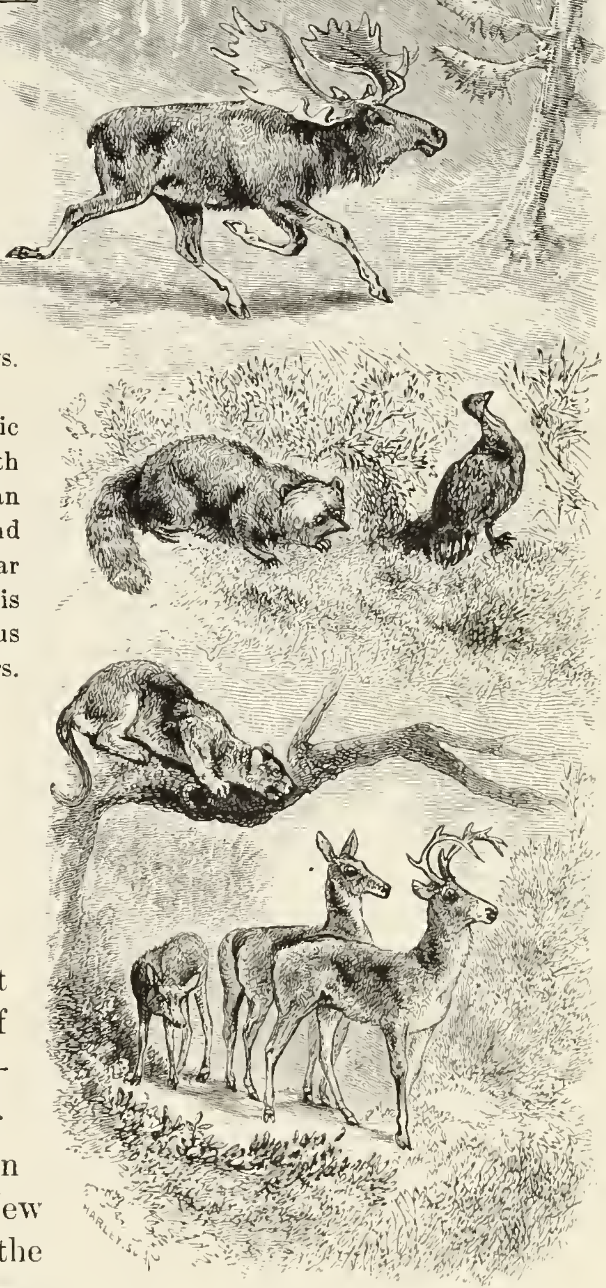
THE ANTARCTIC REGIONS.

Thick pack-ice, extending almost to the Antarctic Circle, has hindered explorations in these regions. Land, however, has been found at different points. In 1840 Lieutenant Wilkes, commanding a United States fleet, discovered the land that bears his name; and shortly after, Captain Ross of the English navy sailed many miles along a rocky coast, which he called, in honor of his queen, Victoria Land.

Penetrating almost to latitude 79°, Ross found two mountains about 12,000 feet high (one of them a volcano in eruption), which he named after his vessels, Erebus and Terror.—No land-animals have been found south of the Antarctic Circle; but the southern waters teem with seals—the sea-leopard, sea-elephant, and sea-lion—and myriads of solemn-looking penguins sit in ranks, like soldiers, on the ice-bound coasts.

NORTH AMERICA.

J. C. Beard, del.



Animals of North America.

In the center-piece we have a scene still common in unfrequented regions of the Great West—Indians hunting the bison; a bison-calf and an antelope are with the herd in front. In old times the bisons are said to have been so numerous as sometimes to dam the rivers when they crossed.

On the left of the center-piece appears the Rocky Mountain sheep, or big-horn. In the vignettes below may be seen the huge grizzly bear devouring its prey; the prairie-dog, especially abundant west of the Missouri River, with the burrowing owl and rattlesnake, which share its subterranean home; and the bald-headed eagle spreading dismay among a flock of wild turkeys. The turkey is a native of America.

On the right we have in succession the musk-ox, which roams in Arctic America to within 11° of the North Pole; the moose (the elk of Europe), with its enormous horns and long swinging trot, an inhabitant chiefly of Canadian forests; the raccoon, and the ruffed grouse (also known as the partridge and pheasant), widely distributed through the United States. The puma (cougar or catamount) ranges the continent from New York almost to Cape Horn; it is represented as about to spring from an overhanging branch on the unsuspicious deer below. The seal frequents the Arctic, as well as the Antarctic, waters. Fur-bearing animals, the marten, sable, etc., abound in the north.

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GENERAL DESCRIPTION.

Area, 8,900,000 square miles. Population, 70,000,000.

Situation, Size.—North America (*see map, p. 10*) occupies the northern part of the Western Continent. Its greatest width (about 3,100 miles) is in the north. Thence it narrows down to fifty miles at the Isthmus of Panama, which connects it with South America. The northwestern extremity is but thirty-six miles distant from Asia, Behring Strait flowing between. Greenland and the northernmost islands of the Arctic Archipelago approach nearer to the North Pole than any other known land.

Coast-line, Rivers, Lakes.—On the eastern side, North America is indented by many large arms of the ocean. Its coast-line, including that of the islands, is about 30,000 miles in length. Its large rivers open the interior of the country to commerce. Its numerous lakes are estimated to contain one-third of all the fresh water on the globe.

Climate, Products.—North America, lying in three zones (*name them*), and traversed by lofty mountain-ranges, is marked by great variety of climate and productions. It gave to the Old World Indian corn, or maize, the potato, tobacco, and chocolate. It contains the great cotton and wheat regions of the world, and mineral treasures of unequaled richness.

Inhabitants.—When Columbus discovered the New World in 1492, nations of the American race, some savage and others more or less civilized, were scattered through North America. Their descendants now number hardly six millions. There are about seven and a half millions of negroes, who have sprung mainly from Africans brought across the ocean as slaves. The Arctic regions are sparsely inhabited by Esquimau tribes, of the Mongolian race. About four-fifths of the population are Caucasians. People of this race made permanent settlements about three centuries ago, and have constantly increased by emigration from the Old World.

Rank, etc.—North America ranks third among the Grand Divisions in size, and fourth in population. It contains the longest river in the world, the Missouri-Mississippi; the largest lake, Superior; one of the most fertile valleys, the Mississippi; the most extensive coal-fields, and the most valuable deposits of gold and silver.

MAP QUESTIONS ON NORTH AMERICA.

General Questions.—In what continent is North America? In what part? In what direction from the equator? What tropic and polar circle cross it? Are these great or small circles, and why? In what three zones does North America lie? In which zone does most of it lie? What part of North America is warmest?

With what Grand Division is North America connected? Point toward South America. Point toward Asia. What capes of Asia and North America approach each other nearest? What water separates them? What is a strait? Which coast of North America has the most advantages for commerce? Why?

Boundaries.—What ocean is north of North America? What ocean, gulf, and sea, east? What ocean, south? What ocean, sea, and strait, west? Bound North America. *North America is bounded on the north by the Arctic Ocean; east by the Atlantic Ocean, the Gulf of Mexico, and the Caribbean Sea; south by the Pacific Ocean; west by the Pacific Ocean, Behring Sea, and Behring Strait.*

(Follow the above model in bounding. Models for describing the situation of the natural divisions are given on pages 10, 11.)

Divisions.—In what part of North America is Da'nish America? Of what two islands is it made up? Describe the situation of Iceland. Of Greenland. What division of North America is nearest to Asia? To what country does Alaska belong? Bound Alaska. What other division lies in the north of North America? Bound Canada.

What country occupies the middle part of North America? Bound the United States, exclusive of Alaska. What separates Alaska from the rest of the United States? What division lies south of the United States? Bound Mexico. What division lies nearest to South America? Bound Central America. Name the divisions of North America.

Islands.—Name some islands in the Arctic waters. Which of these belong to the United States? What island is in the north of Hudson Bay? Describe the situation of Newfoundland (*nu'fund-land*). Of the Bermu'da Islands. Of the Baha'mas.

Latitude.—In what direction do the parallels run on this map? Where are the degrees of latitude that they denote marked? Is this latitude north or south? Why? What two places are in about 30° N. lat.?

Longitude.—How do the meridians run? What do the figures on the meridians at the top of the map denote? What do the figures in the lower margin denote? What is the longitude of Washington? What is the difference in degrees between the longitude of any point from Greenwich and its longitude from Washington? What is the longitude of Austin from Greenwich, and from Washington? Of Porto Rico (*re'ko*), in the West Indies?

Directions.—What lines show the directions north and south? What lines show the directions east and west? What part of Greenland is due north of Newfoundland? In what direction is Newfoundland from the North Pole? Cape Prince of Wales from the North Pole?

Alaska.—What two sounds are on the western coast of Alaska? Are Kotzebue and Norton Sounds straits or bays? What is the principal river of Alaska? Describe the Yu'kon River. How long is it? 2,000 *miles.* What mountain-range is in Alaska? What mountain is on the southeastern boundary? What is the chief town in Alaska?

Dominion of Canada.—By what waters is the coast of the Dominion of Canada indented? Which two divisions of Canada extend to the Arctic waters? What large river is in the northwest? Describe the Mackenzie River. Of what lakes is it the outlet? Describe Great Bear Lake. Great Slave Lake. Athabasca Lake. How is York Factory situated? What is the southern part of Hudson Bay called?

Miscellaneous.—Name the chief arms of the ocean that indent the eastern coast of North America. How is Labrador' situated? Name its two chief settlements. What is the most northerly settlement in Greenland? What other settlements are in Greenland? What does *haab* (pronounced *hahb*) mean in these Danish names? *Hope.*

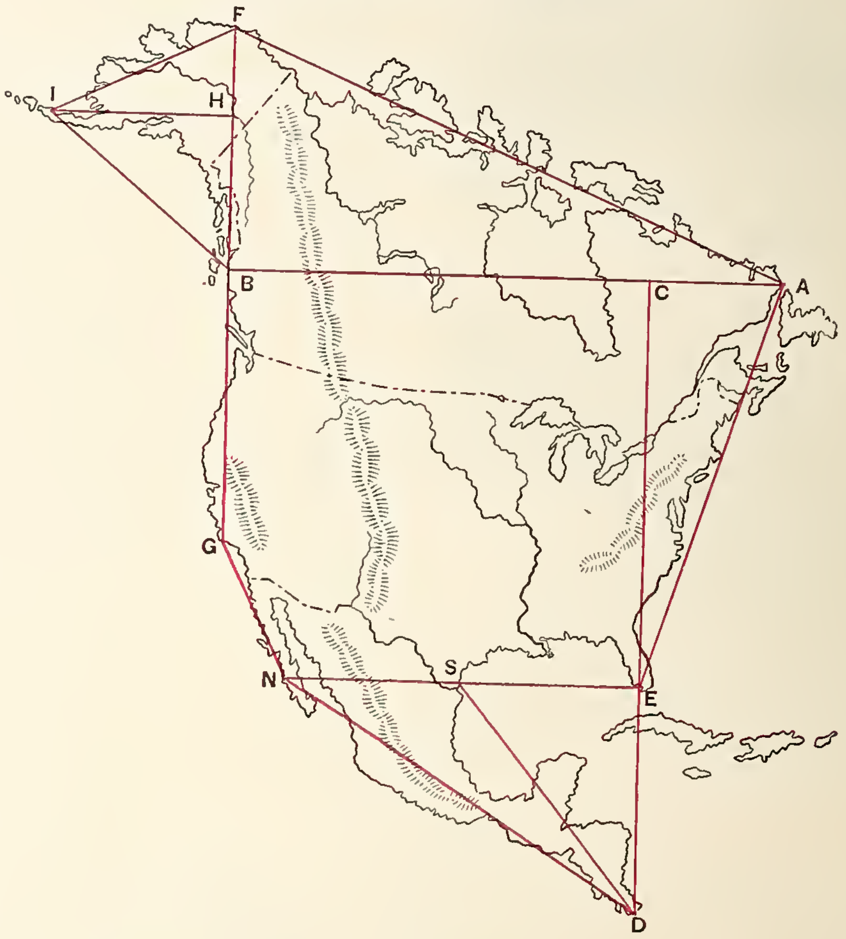
MAP-DRAWING.

To the Teacher.—To insure a fair degree of accuracy in drawing the outline of a country, construction-lines are generally necessary as guides. According to the system pursued in this book, the distances represented by these lines are given in miles, to be laid off by measures which the pupils themselves are to prepare. *The numbers are not to be memorized.*

Each pupil should provide himself with a measure of wood or stiff paper, marked off in divisions according to the scale selected. If the map is to be of the same size as in the book, the scale given on the map must be taken. For the blackboard a larger scale is desirable; and if a uniform scale (No. 1 given below) is used for all the Grand Divisions, and another (No. 2 below) for all the sectional maps of the United States, a correct idea of relative size will be conveyed. Larger scales may be made by doubling, trebling, or quadrupling any of the scales given.

The measures having been prepared, and some of the pupils having been called to the board while the rest get ready their slates or papers, the class is first trained to draw horizontal and vertical lines, defined on page 4. The directions given with the map are then dictated in succession by the teacher, the whole class completing each step before the next is attempted. When the construction-lines have been finished, the pupils may refer to the map and sketch the outline. The exercise on each map may be divided into several lessons, and a part taken with each lesson of the corresponding text. The measurements in miles may be made the basis of questions on the dimensions of countries, the distances of places from each other, etc. (*On map-drawing, see also p. 119.*)

TO DRAW NORTH AMERICA.



Draw the horizontal line A B = 3,000 miles.

Draw the vertical lines B F = 1,325 mi., and B G = 1,475 mi.

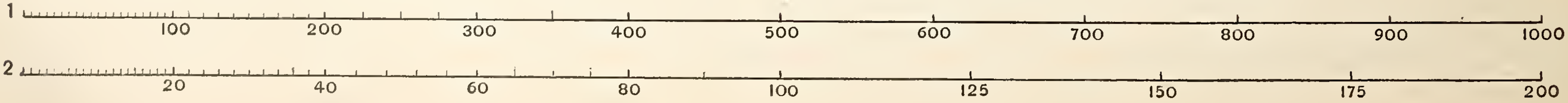
Take A C = 725 mi. From C draw the vertical line C D = 3,400 mi.

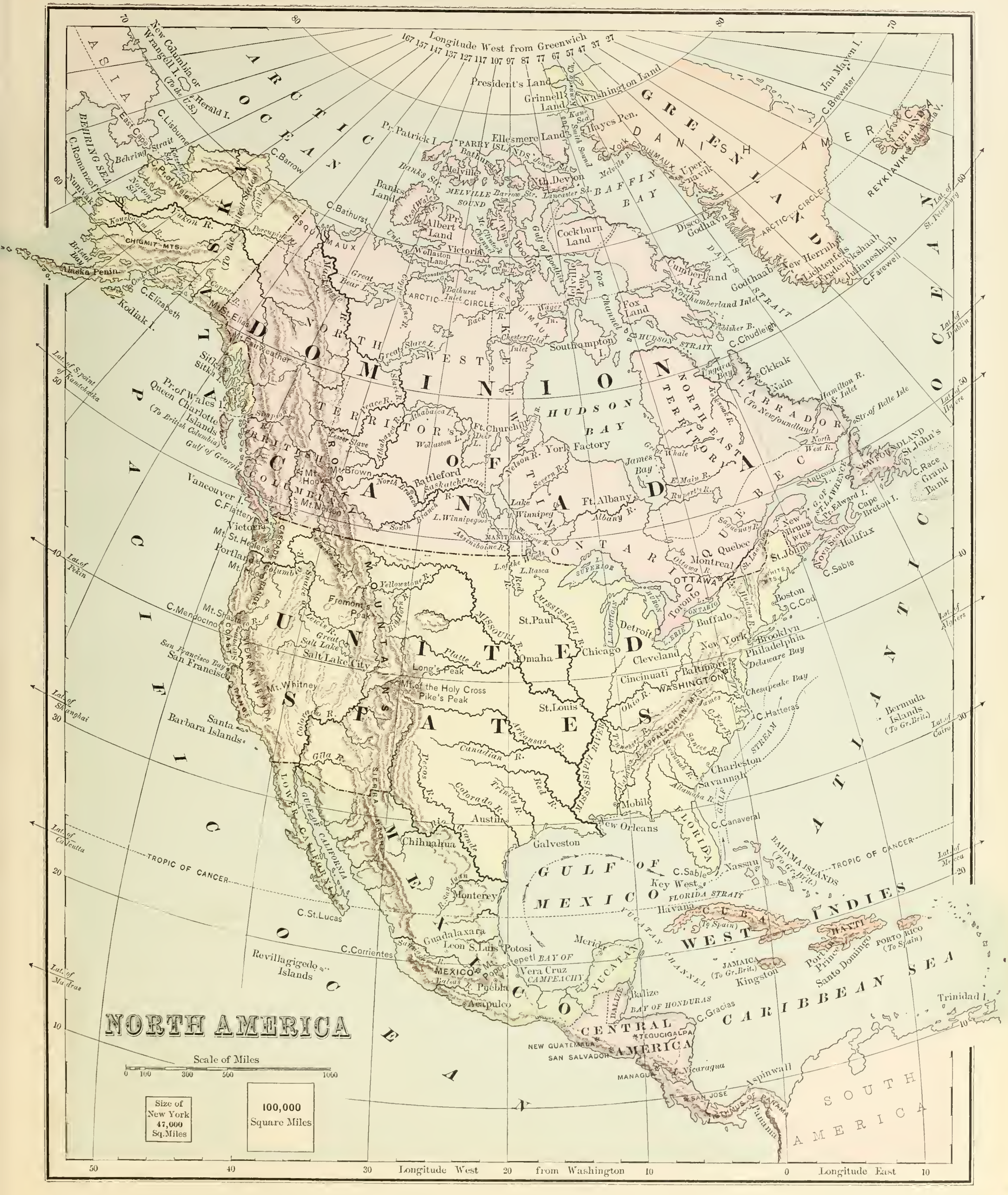
Take C E = 2,200 mi. From E draw the horizontal line E N = 1,900 mi.

Take E S = 960 mi., F H = 500 mi. Draw the horizontal line H I = 960 mi.

Draw F A, A E, F I, I B, G N, N D, and S D.

Sketch the outline. Insert the Rocky Mountains, Sierra Madre, Sierra Nevada, Appalachian Mountains; the Mississippi and Missouri Rivers; the St. Lawrence, and the chain of lakes of which it is the outlet; also the boundaries of the United States.




NORTH AMERICA
Scale of Miles
0 100 300 500 1000
Size of New York 47,000 Sq. Miles
100,000 Square Miles
Longitude West from Greenwich
167 157 147 137 127 117 107 97 87 77 67 57 47 37 27
Longitude West 30 20 from Washington 10 0 Longitude East 10
50 40
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
ASIA
New Columbia or Wrangell I. (To the U.S.)
Herald I.
BEHRING SEA
C. Romanzof
Nunivak I.
East Cape
Behring Strait
C. Lisburne
C. of Pr. of Wales
Norton Sd.
C. Barrow
C. Bathurst
ALASKA
Yukon R.
Porcupine R.
Kouskokwim R.
CHIGMIT MTS.
Bristol Bay
Alaska Penin.
Kodiak I.
C. Elizabeth
Copper R.
Mt. St. Elias
Mt. Fairweather
Sitka I.
Sitka
Pr. of Wales I.
Queen Charlotte Islands (To British Columbia)
Gulf of Georgia
Vancouver I.
C. Flattery
Victoria
Mt. St. Helen's
Portland
Mt. Hood
Mt. Shasta
C. Mendocino
San Francisco Bay
San Francisco
Mt. Whitney
Santa Barbara Islands
President's Land
Grinnell Land
Washington Land
Kane Sea
Smith Sound
Hayes Pen.
Pr. Patrick I.
PARRY ISLANDS
Ellesmere Land
Jones Sd.
Bathurst
Melville
MELVILLE SOUND
Banks St.
Banks Land
Barrow Str.
Lancaster Sd.
Nth. Devon
BAFFIN BAY
Melville B.
York
ESQUIMAUX
Upernavik
Prince Albert Land
Victoria L.
Wollaston Land
Coronation G.
Boothia
Gulf of Boothia
Cockburn Land
Fox Channel
Fox Land
Disco I.
Godhavn
GREENLAND
DANISH AMERICA
ARCTIC CIRCLE
DAVIS STRAIT
Cumberland I.
Northumberland Inlet
Godthaab
New Herrnhut
Lichtenfels
Frederickshaab
Julianeshaab
C. Farewell
Jan Mayen I.
C. Brewster
ICELAND
REYKIAVIK
Frobisher B.
HUDSON STRAIT
C. Chudleigh
Great Bear L.
Mackenzie R.
Bathurst Inlet
Back R.
Wager In.
Chesterfield Inlet
Southampton I.
DOMINION OF CANADA
NORTH WEST TERRITORY's
KEEWATIN
Great Slave L.
Slave R.
Peace R.
Athabasca L.
Athabasca R.
Lesser Slave L.
Wollaston L.
Deer L.
Ft. Churchill
Churchill R.
HUDSON BAY
Nelson R.
York Factory
Severn R.
James Bay
Ft. Albany
Albany R.
Rupert's R.
E. Main R.
Great Whale R.
NORTH EAST TERRITORY
Ungava Bay
Koksoak R.
Okkak
Nain
LABRADOR (To Newfoundland)
Hamilton R. & Inlet
Str. of Belle Isle
North West R.
NEWFOUNDLAND
St. John's
C. Race
Grand Bank
Anticosti I.
G. of St. Lawrence
Pr. Edward I.
Cape Breton I.
New Brunswick
Nova Scotia
Halifax
C. Sable
St. John
QUEBEC
Quebec
Saguenay R.
St. Lawrence R.
Montreal
Ottawa R.
OTTAWA
ONTARIO
Toronto
BRITISH COLUMBIA
ROCKY MTS.
Mt. Brown
Mt. Hooker
Mt. Nelson
Simpson
Saskatchewan R.
North Branch
South Branch
Battleford
L. Winnipegosis
Lake Winnipeg
Winnipeg
MANITOBA
Assiniboine R.
L. of the Woods
L. Superior
L. Itasca
Red R.
UNITED STATES
Yellowstone R.
Fremont's Peak
Big Horn R.
Lewis R.
Columbia R.
CASCADE RANGE
COAST RANGE
SIERRA NEVADA
Sacramento R.
Great Salt Lake
Salt Lake City
Long's Peak
Mt. of the Holy Cross
Pike's Peak
Colorado R.
Gila R.
Missouri R.
Platte R.
Omaha
St. Paul
MISSISSIPPI R.
L. Michigan
L. Huron
L. Ontario
L. Erie
Detroit
Chicago
Cleveland
Buffalo
Hudson R.
WHITE MTS.
Boston
C. Cod
New York
Brooklyn
Philadelphia
Delaware Bay
Baltimore
WASHINGTON
Chesapeake Bay
James R.
Cincinnati
Ohio R.
St. Louis
Tennessee R.
APPALACHIAN MTS.
C. Fear R.
Santee R.
C. Hatteras
Charleston
Savannah R.
Savannah
Altamaha R.
Alabama R.
Mobile
Arkansas R.
Canadian R.
Red R.
Pecos R.
Colorado R.
Trinity R.
Austin
Galveston
New Orleans
FLORIDA
C. Canaveral
C. Sable
Key West
GULF STREAM
Bermuda Islands (To Gr. Brit.)
BAHAMA ISLANDS (To Gr. Brit.)
Nassau
TROPIC OF CANCER
GULF OF MEXICO
FLORIDA STRAIT
Havana
CUBA (To Spain)
HAYTI
Port au Prince
Santo Domingo
PORTO RICO (To Spain)
WEST INDIES
JAMAICA (To Gr. Brit.)
Kingston
YUCATAN CHANNEL
CARIBBEAN SEA
Trinidad I.
MEXICO
Rio Grande
Chihuahua
SIERRA MADRE
LOWER CALIFORNIA
GULF OF CALIFORNIA
R. San Juan
Monterey
C. St. Lucas
Guadalaxara
Leon
S. Luis Potosi
Santiago R.
Popocatepetl
MEXICO
Balsas R.
Puebla
Vera Cruz
BAY OF CAMPEACHY
Acapulco
C. Corrientes
Revillagigedo Islands
Merida
YUCATAN
BALIZE
Balize
BAY OF HONDURAS
C. Gracias
CENTRAL AMERICA
TEGUCIGALPA
NEW GUATEMALA
SAN SALVADOR
MANAGUA
Nicaragua
SAN JOSE
Aspinwall
ISTHMUS OF PANAMA
Panama
SOUTH AMERICA
Lat. of St. Petersburg
Lat. of Dublin
Lat. of Havre
Lat. of Algiers
Lat. of Cairo
Lat. of Mecca
Lat. of S. point of Kamtchatka
Lat. of Pekin
Lat. of Shanghai
Lat. of Calcutta
Lat. of Madras
70 80 60 50 40 30 20 10

PHYSICAL DIVISIONS AND FEATURES.

SURFACE.

The Western Highlands.—A wide and lofty table-land extends through the western part of North America, almost from the Arctic Ocean to the Isthmus of Panama. Its northern and its central part, from which the Rocky Mountains rise, form what is called the ROCKY MOUNTAIN PLATEAU. This is continued southward in the MEXICAN PLATEAU, which has a mean elevation of 8,000 feet, and still farther south in the table-land of Central America. (*Refer constantly to the opposite map.*)

On the western edge of the Rocky Mountain Plateau is the Sierra Nevada (*se-ĕr′ra nay-vah′da*), continued to the north in the Cascade Range. West of these mountains and of the Sierra Madre (*mah′dray*) in Mexico, is a long, narrow strip sloping sharply toward the Pacific and called the PACIFIC SLOPE.

On the eastern side of the Rocky Mountain Plateau lie the GREAT PLAINS, which descend gradually toward the Mississippi River and the Gulf Plain.

MAP QUESTIONS.—Is Alaska mostly table-land or low plain? What part of it is low? Through what three divisions of North America (*compare with map on p. 19*) does the Pacific Slope extend? Through what divisions does the Rocky Mountain Plateau extend? In the extreme north, toward what does this plateau slope? What large river there bounds it on the east? To what valley do the Great Plains extend on the east? What physical division does Mexico form? Describe Central America as regards elevation.

Eastern Plateaus and Low Plains.—From the Great Plains a ridge, called the Height of Land, extends in an easterly direction, terminating in the LABRADOR PLATEAU. This ridge is a watershed separating the streams that flow into Hudson Bay from those that are tributary to the Great Lakes and the St. Lawrence.

Northwest of the Height of Land we have the extensive NORTHERN LOW PLAIN, bordering Hudson Bay, and in the far north diversified with occasional plateaus, which are classed together as the ARCTIC HIGHLANDS.

South of the Height of Land lie the lowlands of the MISSISSIPPI VALLEY, the APPALACHIAN (*ap-pa-lay′tshe-an*) HIGHLANDS, and farthest east a narrow low plain. This plain sweeps round in a curve, and is distinguished in different parts as the ATLANTIC PLAIN and the GULF PLAIN, according to the waters it skirts.

MAP QUESTIONS.—What peninsula belongs partly to the Atlantic and partly to the Gulf Plain? What great river divides the Gulf Plain? To what gulf on the north do the Appalachian Highlands extend? To the shores of what lakes and river on the northwest? Describe the surface on all sides of Hudson Bay. Referring to the map on p. 19, name four large rivers that traverse the Great Plains.

Mountains.—North America contains three great mountain-systems; the Rocky Mountains, the Sierra Nevada, and the Appalachian System. The leading mountain-chains generally trend, or extend, in the direction of the greatest length of the Grand Division in which they are. North America is longest from north to south; accordingly, its three principal mountain-systems trend in a northerly and southerly direction.

The Rocky Mountain System contains peaks more than 15,000 feet high. Near its southern extremity, a remarkable line of volcanoes extends across Mexico from east to west. To the system of the Sierra Nevada belongs the Cascade Range, and near its northern extremity is Mt. St. Eli′as, the highest peak of North America (17,900 feet). The Appalachian System, rising from the Highlands of the same name, includes several parallel ranges of moderate elevation, the highest summit being only 6,707 feet above sea-level.—Describe the mountains named.

DRAINAGE.—OCEAN-CURRENTS.

River-Systems.—The rivers flowing into any great body of water are said to form a River-System.

The rivers of North America form six systems, consisting respectively of streams that flow into, 1. The Arctic Ocean. 2. Hudson Bay. 3. The Great Lakes and the St. Lawrence. 4. The Atlantic. 5. The Gulf of Mexico. 6. The Pacific and its arms. The streams of the Great Basin have no outlet to the ocean, but are either absorbed by the sand or flow into lakes.

The Gulf Stream.—The most important of all the ocean-currents adjacent to North America is the warm, broad, blue Gulf Stream. It enters the Atlantic from the Gulf of Mexico, follows the coast at a distance of about 100 miles as far as Cape Hatteras, and thence bends more to the east. A portion of it finally reaches northwestern Europe, tempering the climate with its warmth.

Consult Maury's "Physical Geography of the Sea," p. 25.

MAP QUESTIONS.—What is the largest river of the Arctic System? What physical division is drained by the Hudson Bay System? To which system do the streams on the southeastern slopes of the Height of Land belong? What system is formed of the streams east of the Appalachian Highlands? What physical divisions are drained by rivers of the Gulf System? Name three large rivers of the Pacific System. Where is the Great Basin?

What is the general direction of the Gulf Stream? Past what Bank does it flow? What current sets out of Baffin Bay? What southerly current flows along the western coast of North America? Of what is the North Pacific Current an offshoot? *Of the warm Japan Current, which sweeps round in a curve and follows the coast of Alaska.*

CLIMATE.—VEGETATION.—MINERALS.

Rainfall.—The northwest coast of North America, owing to the warm Japan Current and southerly winds, has a milder climate than the eastern coast in the same latitudes. There, also, rains are frequent throughout the year, producing a luxuriant growth of timber.

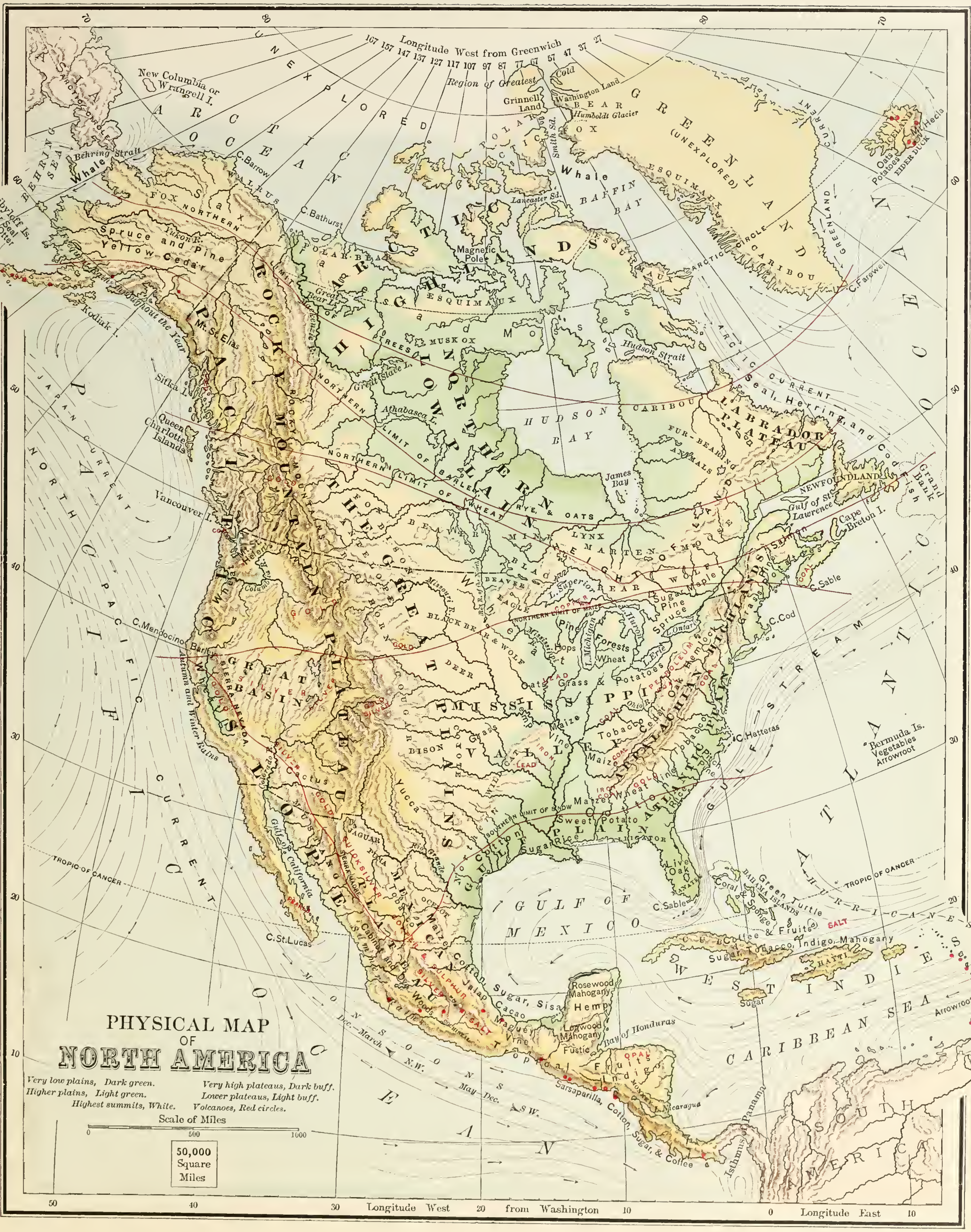
In the Mississippi Valley, the Gulf Plain, and the Atlantic Plain, the rainfall is abundant, contributing to their fertility; but much of the Rocky Mountain Plateau is barren from the want of rain, the winds parting with their moisture before reaching it.

Vegetation.—Minerals.—The distribution of plants follows the usual order, as given on p. 13. As a general rule, the low plains of the middle section take the lead in the production of the vegetable staples, while the richest metallic deposits are in the mountainous regions. The precious metals are found principally on the slopes of the Sierra Nevada, the Rocky Mountains, and the Sierra Madre. Iron and coal are very widely distributed.

MAP QUESTIONS.—What do the red lines on the map show (begin with the most northerly)? How far north on the western coast do barley, rye, and oats grow? On which coast does wheat grow farthest north? On which coast, maize? Where are extensive pine-forests? What parts of North America are noted for the production of wheat? Of maize, or Indian corn? Of tobacco? Cotton? Sugar? Coffee? Indigo? Tropical fruits?

What regions produce the beaver, mink, marten, and other fur-bearing animals? Where is the moose found? The caribou, or American reindeer? The monkey? Name some of the animals that frequent the Great Plains. Where are pearls obtained? Near what lake is a rich copper region? Near what river are lead-mines? Mention the principal mineral products of the Appalachian Highlands. Where else is gold found, and where silver?

What are Monsoons (*see p. 9*)? How do the monsoons on the Pacific coast of Mexico blow? What part of the Atlantic is subject to hurricanes? Where is the magnetic pole, toward which the magnetic needle points? Name the principal physical divisions of North America.



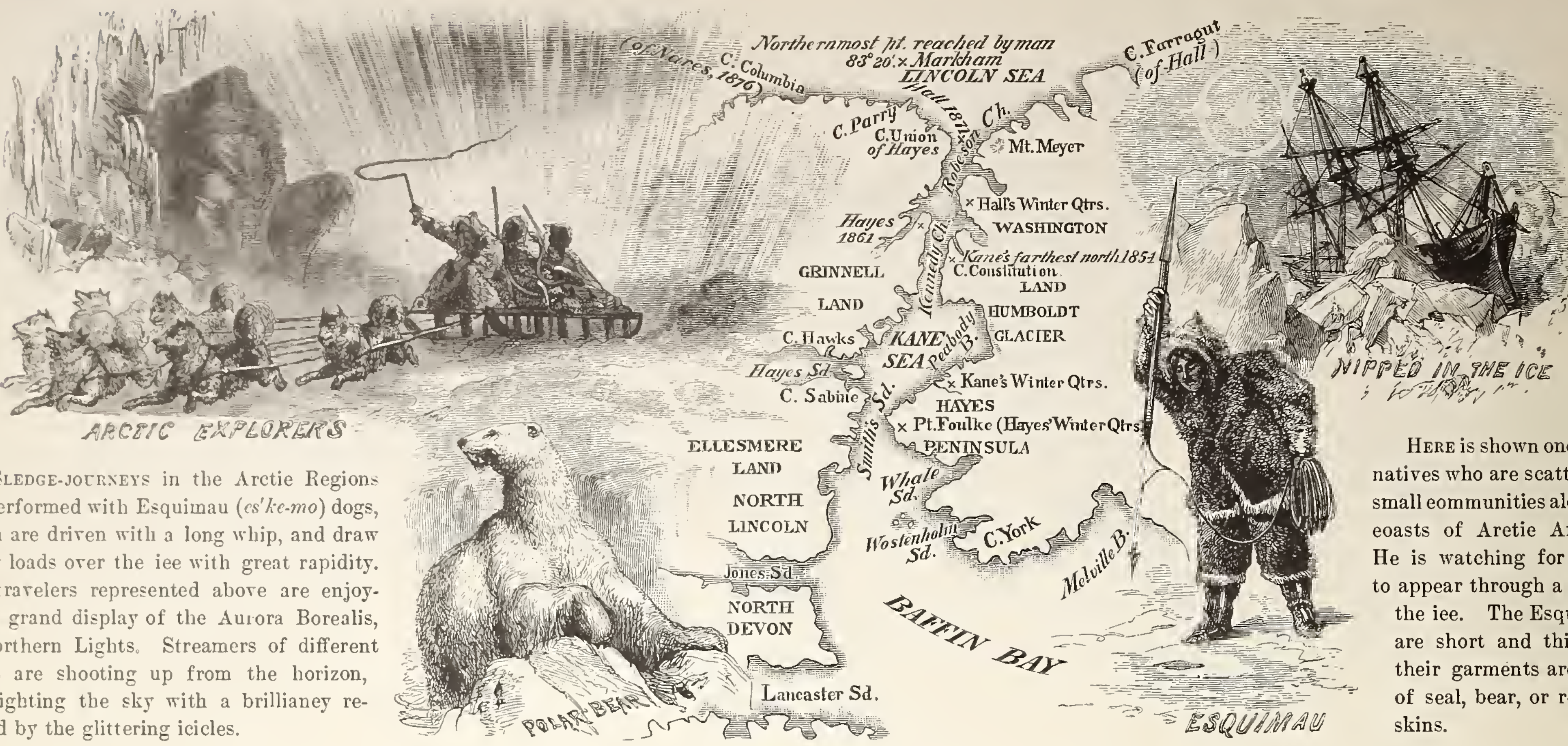
PHYSICAL MAP OF NORTH AMERICA

Very low plains, Dark green.
Higher plains, Light green.
Highest summits, White.
Very high plateaus, Dark buff.
Lower plateaus, Light buff.
Volcanoes, Red circles.

Scale of Miles

0 500 1000

50,000
Square
Miles



Sledge-journeys in the Arctic Regions are performed with Esquimau (*es'ke-mo*) dogs, which are driven with a long whip, and draw heavy loads over the ice with great rapidity. The travelers represented above are enjoying a grand display of the Aurora Borealis, or Northern Lights. Streamers of different colors are shooting up from the horizon, and lighting the sky with a brilliancy reflected by the glittering icicles.

Here is shown one of the natives who are scattered in small communities along the coasts of Arctic America. He is watching for a seal to appear through a hole in the ice. The Esquimaux are short and thick-set; their garments are made of seal, bear, or reindeer skins.

THE ARCTIC REGIONS.

Situation.—The Arctic Regions of North America lie north of the Arctic Circle, and include the northern coast of the mainland, the adjacent islands, and the greater part of Greenland.

The word *arctic* is from the Greek *arktos*, a bear. It is applied to the northern regions, because the constellation, or group of stars, known as the Little Bear is always in the north. The north star is in the Little Bear.

Many of the northern waters and islands are named after their explorers; as, *Hudson* Bay, *Baffin* Bay, *Kane* Sea, *Hayes* Sound.

Vegetation.—Almost the whole of Arctic America consists of treeless wastes. A forest-growth is found only near the mouth of the Mackenzie River. Elsewhere vegetation is limited to li′chens and mosses, dwarfish plants and grasses.

Climate.—The climate is extremely cold. The crew of the Alert, in latitude 83° 20′, endured a temperature 106 degrees below the freezing-point. Ice sometimes forms eighteen feet thick.

Animal Life.—The chief land-animals are the polar bear, musk-ox, fox, wolf, hare, lemming (an animal resembling the field-mouse), and Esquimau dog. As summer approaches, myriads of sea-fowl appear, feasting on the fish with which the waters teem.

The seal and the walrus furnish the Esquimaux, who rove along the coasts, with food and fuel. Whales, though less abundant than formerly, are still taken in Baffin Bay, and the icy waters beyond. One of these immense creatures, sixty feet long, will yield twenty tons of oil.

Explorations.—If a ship could sail from Europe to China by way of the Arctic waters, the route would be materially shortened. Hence many attempts have been made to find a "Northwest Passage," but without success, on account of the ice.

McClure and his men are the only company that ever made the passage. They entered from Behring Strait, and sailed east till their vessel became ice-bound. Abandoning her and still pushing east, after three winters of suffering they met a party that was penetrating west from Baffin Bay, and finally succeeded in reaching the Atlantic.

Sir John Franklin's expedition, undertaken in 1845, excited great interest. For years no tidings of its fate could be obtained; but at last it was ascertained that Sir John had passed through Lancaster Sound (*refer to map, p. 19*), and explored the waters west of it till his ships were caught in the ice off King William's Land. Here he died. The ice not breaking up, the survivors, after remaining there nineteen months, abandoned their ships and tried to make their way to the nearest settlements. But their strength failed, and the last of the party perished from exhaustion near the mouth of the Back River.

The route usually pursued by navigators who have sought to reach the pole is that shown in the above engraving, by way of Baffin Bay, Smith's Sound, and Kennedy Channel. This was the region explored by Dr. Kane, two of whose party discovered what they supposed to be an open polar sea; by Hayes, who surveyed 800 miles of coast; by Hall, of the Polaris, who wintered in a higher latitude than any of his predecessors; and by Nares, in the Alert, whose officers, Markham and Parr, in 1876 attained the northernmost point yet reached by man, 83° 20′—only 400 miles from the North Pole.—(*Consult Nares's "Narrative of a Voyage to the Polar Sea," vol. i., p. 377.*)

The whole country back of the coasts that have been visited, is an unexplored wilderness of ice.

Glaciers.—Greenland abounds in Glaciers, which originate in its vast fields of snow. Subjected to the pressure of their own mass and to alternate surface meltings and freezings, these great deposits of snow are converted into seas of ice, solid yet capable of adapting themselves to the irregularities of their channels. The great Humboldt Glacier extends along the coast for fifty miles.

On glaciers, *consult Le Conte's "Elements of Geology," p. 43.*

Icebergs.—Pushed on by the masses behind them, the glaciers slowly creep down into the Arctic waters. Here they are undermined by the waves, till immense mountains of ice become detached by their own weight and fall into the sea.

Thus are formed Icebergs of incredible size, sometimes several miles in length and 200 feet high. Seven-eighths of their mass being under water, they must in some cases weigh millions of tons. Floating with the current through Davis Strait into the Atlantic, they sometimes come into collision with passing vessels. They gradually melt, and before reaching latitude 40° disappear.

DIVISIONS OF NORTH AMERICA.

Political Divisions.—The political divisions of North America will be described in the following order:—I. Danish America. II. Alaska. III. The Dominion of Canada, and Newfoundland. IV. The United States, exclusive of Alaska. V. Mexico. VI. Central America. VII. The West Indies.

DANISH AMERICA.

Danish America belongs to Denmark, a kingdom of Europe whose people are called Danes. It consists of the islands of Greenland and Iceland.

GREENLAND.—Greenland is either one large island or a group of islands bridged together with ice. How far north it extends, is unknown. The interior is unexplored. A little barley and a few garden-vegetables are raised in the south.

Inhabitants.—There are about 300 European inhabitants, mostly Danes. The natives are Esquimaux or half-breeds, who subsist by fishing and seal-hunting. Those in the south have given up their wandering habits, and embraced Christianity. Their villages extend along the western coast northward from Cape Farewell. Danish directors govern the several districts.

Consult Dr. Hayes's "Land of Desolation," p. 26.

Commerce.—All the trade is in the hands of a Danish company, and its profits go to the King of Denmark. Grain, coffee, sugar, tobacco, and firewood, are sent out, and distributed to the people in exchange for dried unsalted cod (called *stock-fish*), seal and reindeer skins, and whale and seal oil.

History.—Why is this icy region called *Green*land? It received the name 900 years ago, because the southern part looked green and fertile to the first comers from Iceland. The climate was then much milder than at present, and vegetation was more abundant. Settlers were attracted from Iceland, and at one time Greenland contained flourishing farms and villages. But pestilence, attacks of the Esquimaux, and a hostile fleet from Europe, soon destroyed the colonists, and in the time of Columbus little was known in Europe of this northern land.

ICELAND, 160 miles east of Greenland, is about equal in size to Ohio. The greater part is uninhabitable, being covered with glaciers, lava-fields, and rough mountain-masses. The island was evidently upheaved by volcanic action; and several volcanoes, including Mt. Hecla, still from time to time have violent eruptions, sending forth rivers of lava. A hundred geysers (*ḡi'sers*), or high-spouting springs of boiling water, within a circuit of two miles, are a great curiosity.

Productions, Exports, etc.—Pasturage is abundant. Sheep and cattle are the chief dependence. The people barter wool, woolen stockings and mittens, stock-fish, Iceland moss, and eider-down, for the necessaries of life and such few luxuries as they can afford. The trade is mostly with Denmark and Scotland.

Vast numbers of eider-ducks frequent Iceland. The down collected from their nests is much valued for its softness and warmth. It is exported in three-pound balls, a little larger than an orange.

Six hundred miles east of Iceland is Norway, a country of northern Europe. Its people in old times were great sea-rovers, and they first settled Iceland a thousand years ago. The Icelanders are honest and hospitable. They still speak the old Norse language. Almost every one can read and write.

By a new constitution granted to the Icelanders in 1874, they are invested with the right of making their own laws and administering the affairs of the island.

Reykiavik (*ri'ke-ạ-vik*)—*steam-town*, so called from the hot springs near it) is the capital of Iceland. It is a collection of one-story wooden houses, but has a college and a public library.

ALASKA.

Alaska forms nearly one-sixth of the whole United States. It was bought in 1867 from Russia, to which the country on the opposite side of Behring Strait belongs.

In the south are forests of large trees, and garden-vegetables can be raised. Timber and ice are exported, but the chief importance of Alaska is derived from its fisheries and furs. Great numbers of fur-seals and sea-otters are captured.

The Aleutian (*ạ-leu'she-ạn*) Islands, which belong to Alaska, are volcanic. They are inhabited by the Aleuts, an uncivilized people of the Mongolian race, similar to the Esquimaux.

Review Questions.—What lands approach nearest to the North Pole? Describe the shape of North America. In what does North America surpass the other Grand Divisions? Which of the five races is not represented among the inhabitants of North America? What race is most largely represented? To what race did the original inhabitants belong?

To which of the five races do most of the Greenlanders belong? Describe the roving tribes of Esquimaux. In what parts of northern North America are volcanoes? For what is Alaska chiefly valuable? For what, Iceland? Describe the route usually followed by Arctic explorers. Give an account of McClure's expedition. Of Sir John Franklin's.

On what do the numerous birds of the Arctic regions live? What makes Alaska warmer than Labrador? What grow in Iceland? What is the chief place in Alaska? In Iceland? How are glaciers formed? Icebergs? Describe the Gulf Stream. Write a composition on the Arctic Regions.

* * *

British Possessions.—Great Britain, one of the leading powers of Europe, has large possessions in North America. These consist of the Dominion of Canada, the Colony of Newfoundland, the Colony of Balize (*bạ-leez'*) in Central America, the Bermudas, and a number of islands in the West Indies.

DOMINION OF CANADA.

Area, 3,500,000 square miles. Population, 4,352,000.

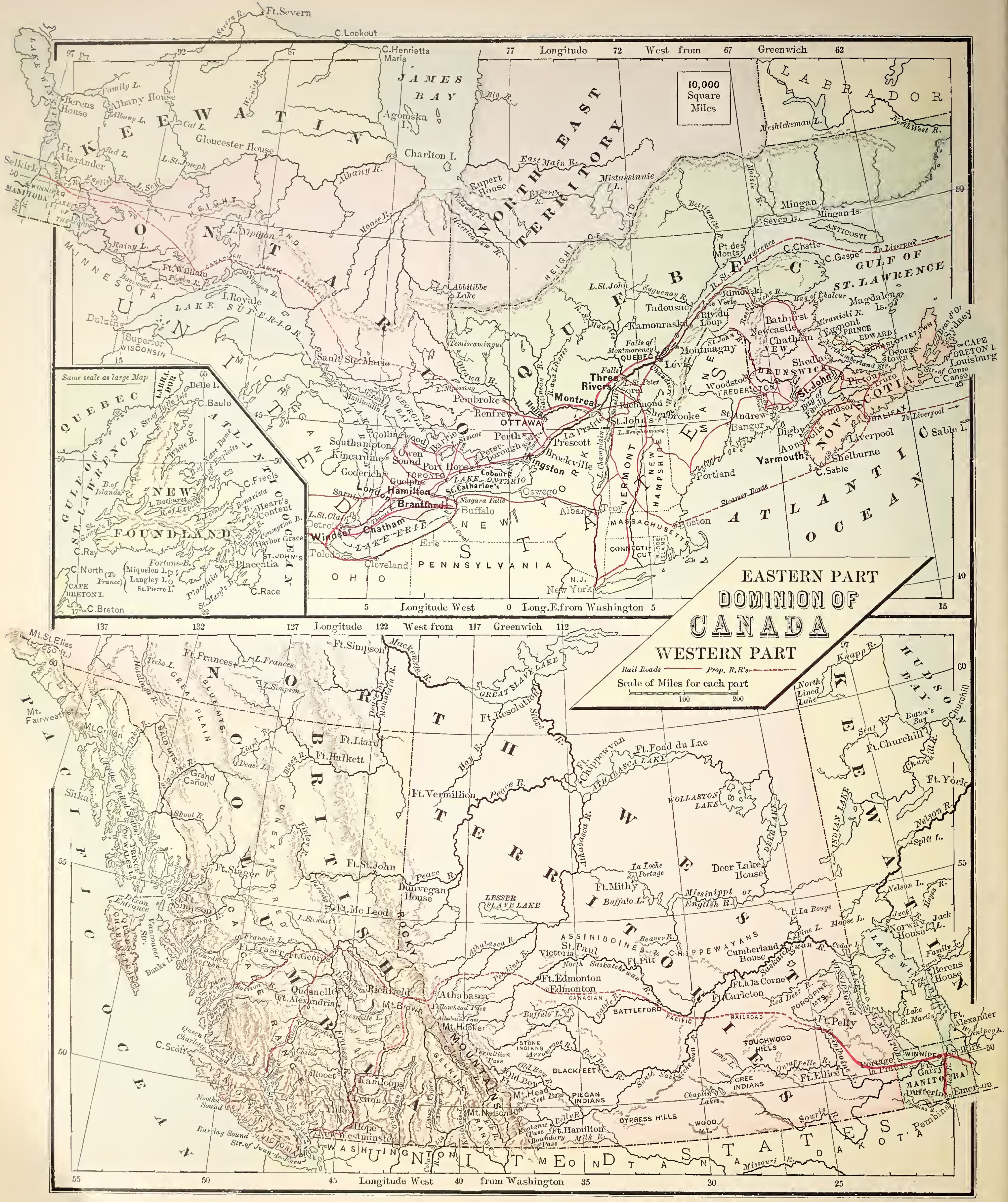
Extent.—Provinces.—The Dominion of Canada extends from the United States to the Arctic Ocean, and from the Atlantic to the Pacific. It is inhabited mainly by people of British descent and emigrants from Great Britain.

Canada embraces seven provinces, besides the vast Northwest and Northeast Territories, and the District of Keewa'tin. The provinces are British Columbia, Manito'ba, Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island.

Government.—The executive authority is vested in the British sovereign, represented by the Governor-General, whom that sovereign appoints. The Governor-General acts under the advice of a Privy Council selected by himself. The law-making power resides in a Parliament, composed of a Senate and a House of Commons. Senators are appointed by the Governor-General. Members of the House of Commons are elected by the people.

The local affairs of each province are regulated by a Legislature and a Lieutenant-Governor appointed by the Governor-General. A Lieutenant-Governor is also appointed for the Northwest Territories.

Ottawa, in the province of Ontario, is the capital of the Dominion. Each province has, besides, its own seat of government.



EASTERN PART
DOMINION OF CANADA
WESTERN PART

MAP QUESTIONS ON CANADA.

(*Refer to the opposite map, and to maps of North America, pp. 19, 21.*)

Situation, Boundaries.—In what part of North America is the Dominion of Canada? What portion of the Dominion appears in the upper part of the opposite map? In the lower part? What large island represented on this map is no part of Canada? Through what lakes, and what part of them, does the boundary between Canada and the United States pass? Name four rivers that form part of this boundary.

Elevation—What part of Canada is mountainous? What province has the Rocky Mountains on its eastern boundary? Is Ontario mainly a plateau or a low plain (*map, p. 21*)? Which is Quebec? New Brunswick? Nova Scotia? What ridge forms the northern boundary of Quebec? To what physical division does Keewatin belong?

Latitude, Longitude, etc.—What parallel of latitude traverses the southern part of Canada? Going west from the Atlantic on parallel 50° N., what divisions of Canada would you successively cross? Which is farther east, Ottawa or Washington? Does the sun rise first at Ottawa, Montreal, or Washington? Does the sun set at Washington before or after it sets at Toronto?

Rivers.—Name the largest river of Canada. Which is the most important river commercially? *St. L.* Why? Describe the St. Lawrence. To what river-system do the streams of Quebec belong? What river flows between Quebec and Ontario? Describe the Ottawa River. The Saguenay (*sag-e-nay'*). What river separates Ontario from Keewatin? Describe the Albany River.

Lakes.—What province has four of the Great Lakes on its boundary? Which is the largest lake on the boundary of Ontario? What arm of Lake Huron indents the shore of Ontario? What river connects the Lake of the Woods with Lake Winnipeg? Describe Lake Winnipeg. What two lakes are connected with Lake Winnipeg?

Miscellaneous.—Which province of Canada extends farthest south? Farthest north? Farthest east? Farthest west? What natural division does Nova Scotia form? In what direction is Manitoba from Nova Scotia? Ontario from Quebec? Keewatin from Ontario? Which province has the largest lake commerce?

Which of the seven provinces is the largest? The smallest? Which border on the Atlantic and its arms? On the St. Lawrence? Which borders on the Pacific? Which are inland? On what waters can you sail from Toronto to Fredericton? What two ports are connected with Liverpool by steamers?

THE CANADIAN TERRITORIES.

How distinguished.—Canada embraces vast territories once owned by the Hudson Bay Company, and purchased of it by the Dominion in 1869. The greater part of this tract is known as the Northwest Territories. The District of Keewa'tin borders Hudson Bay on the west; and the region formerly called Rupert's Land, east of Hudson Bay and James Bay, is now distinguished as Northeast Territory.

Northwest Territories.—A wide tract of the Northwest Territories, extending northwest from Manitoba to the Peace River, consists of prairie-land and affords excellent pasturage. North of this are extensive forests. The white inhabitants are as yet outnumbered by the Indians, of whom the Blackfeet are the most powerful. BATTLEFORD is the seat of government.

Furs are the great product of the Canadian territories, which furnish two-thirds of the world's supply. The Hudson Bay Company has carried on the fur-trade in this region for two hundred years, and still maintains numerous "Forts" and "Houses". To these stations, supplies of fire-arms, hardware, cotton goods, tobacco, etc., are sent out, by boats in summer, and on dog-sleds in winter; and there they are exchanged by resident traders for the skins of martens, minks, beavers, foxes, etc., brought in by the trappers, who are mostly Indians and half-breeds.

Fort Garry, in Manitoba, in consequence of its railroad connection, has become the headquarters of the Company. York Factory, or Fort York, formerly the most important post, is accessible to vessels only during two months of the year, on account of the ice in Hudson Bay.

Consult Robinson's "Great Fur Land," p. 326.

MAP QUESTIONS.—To what do the Northwest Territories and Keewatin extend on the north? On the south? What large river traverses the southern part of the Northwest Territories? Describe the Saskatch'ewan. What river is the outlet of Lake Winnipeg? Describe the Nelson River. What post is at its mouth? Describe the Peace River, the favorite abode of the beaver. What projected railroad crosses the Northwest Territories? How is Battleford situated? Mention some of the Hudson Bay Company's posts.

THE CANADIAN PROVINCES.

BRITISH COLUMBIA, the largest of the Canadian Provinces, is also the most mountainous and the richest in mineral treasures. Gold is obtained in considerable quantities, especially in the valley of the Fraser River. Veins of silver, copper, and lead, have been found. Coal abounds on Vancouver Island, whence it is exported to California.

Climate, Exports.—The climate is moist on the coast, and mild for a country so far north. The principal exports are gold, coal, furs, forest-products, which are carried even to Australia, and fish, with which the coasts and rivers are alive.

VICTORIA, on Vancouver Island, is the capital. Vancouver was an English navigator, who discovered the island and explored the Pacific coast of North America for 9,000 miles.

MAP QUESTIONS.—Bound British Columbia. What kind of a coast has it? Describe the Fraser River. Through what strait does the international boundary pass? Describe the Strait of Juan de Fuca (*hoo-ahn' day foo'kah*). What waters separate Vancouver Island from the mainland? Describe the situation of Victoria. Of New Westminster.

Can barley, rye, and oats, grow in British Columbia (*see Physical Map, p. 21*)? Can wheat or corn be raised there? In which physical divisions of North America is British Columbia?

MANITOBA lies mainly in the same rich prairie tract which traverses the Northwest Territories. It contains some of the best wheat-lands in the world. Agriculture is the chief pursuit, and wheat is the staple crop.

Inhabitants, etc.—Among the inhabitants are emigrants from Ontario, as well as from Russia and other countries of Europe. Manitoba is connected by railway with the railroad system of the United States. Steamers ply on the Red River, the Assiniboine, Lake Winnipeg, and the Saskatchewan.

WINNIPEG, "the Gate City of the Northwest," is the capital.

Manitoba gets its name from Lake Manitoba. The word means "Spirit Straits," there being in one part of the lake troubled waters for which the Indians could account only by ascribing them to spirits.

MAP QUESTIONS.—Bound Manitoba. By what rivers is Manitoba drained? Into what does the Red River empty? Describe the Assiniboine. How is Winnipeg situated? What fort is near it? What makes Fort Garry important? What railroad is to pass near Winnipeg? Is Manitoba nearer the North Pole or the equator? Is it nearer the Atlantic or the Pacific? What is the shape of Manitoba? What is its length, measured by the scale of miles on the map? What is its width? Draw its outline as nearly as you can.

In what direction is Ontario from Manitoba? Bound Ontario.

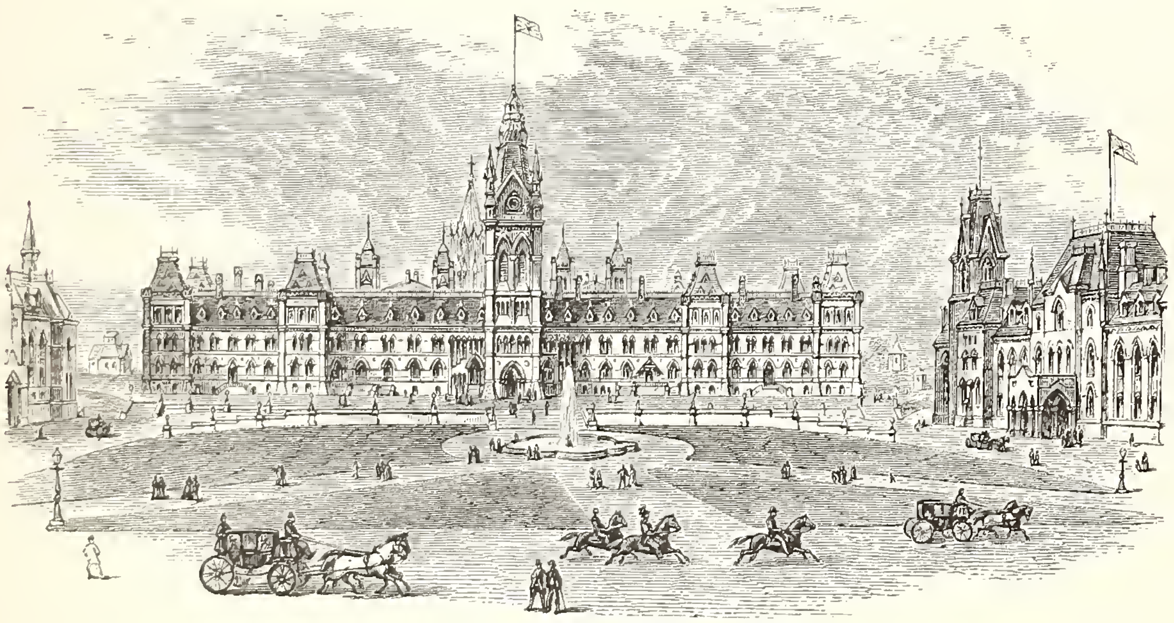
ONTARIO is the most populous of the Canadian provinces. The north is a forest region, thinly inhabited by Indians; the settled portion is in the southeast. The fertile peninsula between Lakes Huron, Erie, and Ontario, has been called "the Garden of Canada". Agriculture is the leading pursuit, and wheat is the staple product.

Canals.—To enable vessels to pass from Lake Erie to Lake Ontario notwithstanding the Falls of Niagara, the Welland Canal has been constructed. Canals have also been built around the rapids in the St. Lawrence River, which is thus made a highway of commerce from the lakes to the ocean.

A canal is a watercourse in a channel dug for the passage of boats, generally from one body of water to another of a different level. In this case, it is built in sections, each level throughout, but of a different elevation from those next to it. Between these levels are *locks*, or apartments having at each end gates provided with valves.

Water always finds its level. When, therefore, a boat is descending the canal, the lock having been filled with water from the upper level, the boat enters it. The upper gates are then closed, and the valves in the lower gate opened; when the water gradually flows out, and the boat sinks with it to the lower level. In ascending, the lower gates being open, the boat enters, and the gates are closed behind it. The valves in the upper gates being then opened, the water gradually flows into the lock and raises the boat to the upper level.

Cities.—Ontario contains Ottawa, the capital of the Dominion. The government buildings are the chief ornaments of the city; the lumber-trade is its main source of wealth. Ottawa is at one end of the Rideau (*re-do'*) Canal, which connects the Ottawa River with Lake Ontario, at the busy port of Kingston.



Parliament-House, Ottawa.

Toronto, a commercial and manufacturing city, is the capital of the province and the site of a flourishing university.

Map Questions.—Which end of the Welland Canal is the higher? What falls belong partly to Ontario? What river of Ontario is named from an animal found in the forests? Describe the Thames (*temz*) River. What took place on this river? *The battle of the Thames (October 5, 1813), in which the British were defeated by General Harrison, and the Indian chief Tecumseh was slain.—(Consult Lossing's "Field-Book of the War of 1812," p. 553.)*

Which states of the United States are nearest to Ontario? How is Ottawa situated? Toronto? Kingston? Hamilton? Where is St. Catharine's, noted for its mineral springs? What waters are on the boundaries of Ontario? In what direction is Quebec from Ontario? Bound Quebec.

Questions.—What possessions has the British Empire in North America? What is the extent of the Dominion of Canada? Its population? Its government? Its capital? What does it embrace? Describe the government of the provinces. How did the Dominion acquire its territories? Give an account of the Northwest Territories. What is the seat of government? How is the fur-trade carried on? Where are the headquarters of the Hudson Bay Company?

Describe British Columbia. What minerals does it contain? Describe the climate. Mention the principal exports. What is the capital? Describe Manitoba. What does the name mean? What is the leading occupation? The staple crop? The capital? Give an account of the inhabitants. Of the commercial facilities.

Describe Ontario. What is the leading pursuit? The staple? What canals are in Ontario? What is effected by means of these canals? What is a canal? How do boats ascend and descend canals? Name three cities of Ontario. What cities are connected by the Rideau Canal? Describe Ottawa. Of what is Toronto the site?

* * *

QUEBEC is larger and more hilly than Ontario. Its winters are very cold, the rivers remaining frozen four or five months every year. The southwestern part of the province is best suited for tillage. Oats, potatoes, and hay, are the principal crops. Maple-sugar is made in large quantities.

Inhabitants, etc.—Most of the people are of French descent, speak the French language, and belong to the Roman Catholic Church. Here, as in Ontario, separate public schools are maintained for Catholics and Protestants.

Forests cover much of the surface. The timber-lands are leased by the Government for terms of years, and lumbering is one of the leading pursuits. Rafts of logs fill the coves of the St. Lawrence near Quebec for miles. The fisheries, also, are very profitable.

Cities.—Quebec, the oldest city of Canada, is the capital of the province. The upper city, built on strongly-fortified heights, affords grand views of the St. Lawrence; the lower city, at the base of the bluff, is the business part. Quebec is a great lumber-market and a ship-building port; steamers connect it with different cities of the British Isles.

Montreal, the largest city and commercial metropolis of Canada (population, 140,863), is distinguished for its handsome churches—among them the Cathedral now building, on the plan of St. Peter's at Rome. The Victoria bridge is one of the notable structures of Montreal. It forms an immense iron tube, two miles long, through which the cars of the Grand Trunk Railway cross the St. Lawrence River.

Map Questions.—What lake is on the boundary between Quebec and New York? Between Quebec and Vermont? Between Quebec and Ontario? What large island in the Gulf of St. Lawrence belongs to Quebec? Describe the Bay of Chaleur (*shah-loor'*). How is the city of Quebec situated? Montreal? At the junction of what rivers is Three Rivers, important for its lumber-trade? Describe the St. Maurice (*mo-reece'*) River. What river is the outlet of Lake Champlain? What falls are near Quebec? What place is opposite Ottawa? From what does the Restigouche (*res-te-goosh'*) River, noted for its salmon, separate Quebec? Bound New Brunswick.

NEW BRUNSWICK has an extensive coast, affording facilities for fishing, ship-building, and commerce, which are leading occupations. Lumber and the products of the fisheries form the principal exports. There are large fields of bituminous coal.

Cities.—Fredericton, the capital, carries on an active trade with the interior. St. John, the largest city, has a commodious harbor and is the chief seat of foreign commerce. It was founded by loyalists who left the United States after the Revolution.

NOVA SCOTIA, the peninsular province, is well provided with harbors. Fishing and ship-building are favorite pursuits. The river-valleys are fertile, and produce various grains and vegetables. Excellent coal, iron-ore, and some gold, are obtained by mining.

The Bay of Fundy is remarkable for its high tides. The waters rush in from the ocean so rapidly as to rise a foot in five minutes, and often overtake swine that come down to the shore to feed on shell-fish.

Halifax, the capital, has one of the best harbors in the world. This city is the great winter port of the Dominion, and the chief British naval station in North America.

The name Nova Scotia means *New Scotland;* but the peninsula was first peopled by the French, who called it Aca'dia. After a long struggle between the French and the English, it fell into the hands of the latter. Several thousand of the French residents, hesitating to take the oath of allegiance, were torn from their homes and property, and transported to the southern colonies.—(*Consult Bancroft's "History of the United States," vol. iv., p. 202.*)

Cape Breton (*brit'un*) Island is attached to Nova Scotia. Here was the once famous stronghold of Louisburg.

PRINCE EDWARD ISLAND is the smallest but most thickly settled of the provinces. Agriculture, fishing, and ship-building, are the chief occupations. Oats and potatoes, wheat and barley, are the most important crops. A railroad traverses the island. In winter, passengers are carried over to New Brunswick in ice-boats (across what strait?). Charlottetown is the capital.

Map Questions.—What part of New Brunswick is most elevated? What is the principal river of New Brunswick? Describe the St. John. What river forms part of the boundary between New Brunswick and Maine? Describe the Bay of Fundy. How is Fredericton situated? St. John? What capital is in the same latitude as St. John? With what province does an isthmus connect New Brunswick?

Bound Nova Scotia. How is Halifax situated? Yarmouth? What capes are on the coast of Nova Scotia? What island is nearly divided by an arm of the ocean? In what province is Cape Breton included? Name the island province. Describe the situation of Prince Edward Island. What is its capital? How is Charlottetown situated? Where are the Magdalen Islands, inhabited mostly by fishermen of French descent?

* * *

Early History of Canada.—The French were the first to settle Canada. They called it New France. Cartier (*kar-te-ay'*) was its earliest explorer (1534). Champlain, "the Father of New France," founded Quebec in 1608, sailed up the St. Lawrence, and penetrated to the lake since called by his name. Jesuit missionaries soon visited different parts of the St. Lawrence valley, and numerous settlements sprung up.

The English claimed the country by the right of prior discovery, and a long war was carried on with the French for its possession (1754–1763). At length the English triumphed, and Canada has ever since remained in their hands.

Canadian Commerce.—Since the formation of the Dominion of Canada in 1867, by the union of the provinces under one general government, important internal improvements have been undertaken. The Intercolonial Railway, connecting the interior with the ports of St. John and Halifax, has greatly increased the direct trade with the West Indies, South America, and Great Britain. The Canadian Pacific Railway will link ocean to ocean, and develop the fertile prairies of Manitoba and the Northwest, as well as the mineral resources of British Columbia.

The settled parts of the Dominion are traversed by numerous railways. In the tonnage (number of tons, as measured for registry) of her vessels, Canada is surpassed only by Great Britain and the United States. Her trade is mainly with these countries.

Herring-Fishery, Newfoundland.

NEWFOUNDLAND.

The island of Newfoundland, to which Labrador on the mainland is attached, is a colony of Great Britain. Dense fogs prevail on the coasts. Copper is the chief mineral.

Nine-tenths of the people are interested in the cod, seal, herring, and salmon fisheries. The neighboring waters are the best fishing-grounds in the world. Hundreds of vessels frequent the Grand Bank, which is the resort of myriads of codfish.

St. John's, the capital, exports fish and fish-oil.

Map Questions.—Describe the situation of Newfoundland. Mention its three principal capes. How is St. John's situated? The Bay of Exploits? The Strait of Belle Isle? Which way is Labrador from Newfoundland? Newfoundland is the terminus of submarine telegraph cables that cross the Atlantic; why are they brought to this island instead of more important points?

Questions.—State what you know about the Province of Quebec. About its inhabitants. About lumbering in Quebec. Describe the capital. What is the largest city? Describe Montreal. What are leading pursuits in the Province of New Brunswick? Its principal exports? What is the chief mineral? The capital? The largest city? Describe St. John.

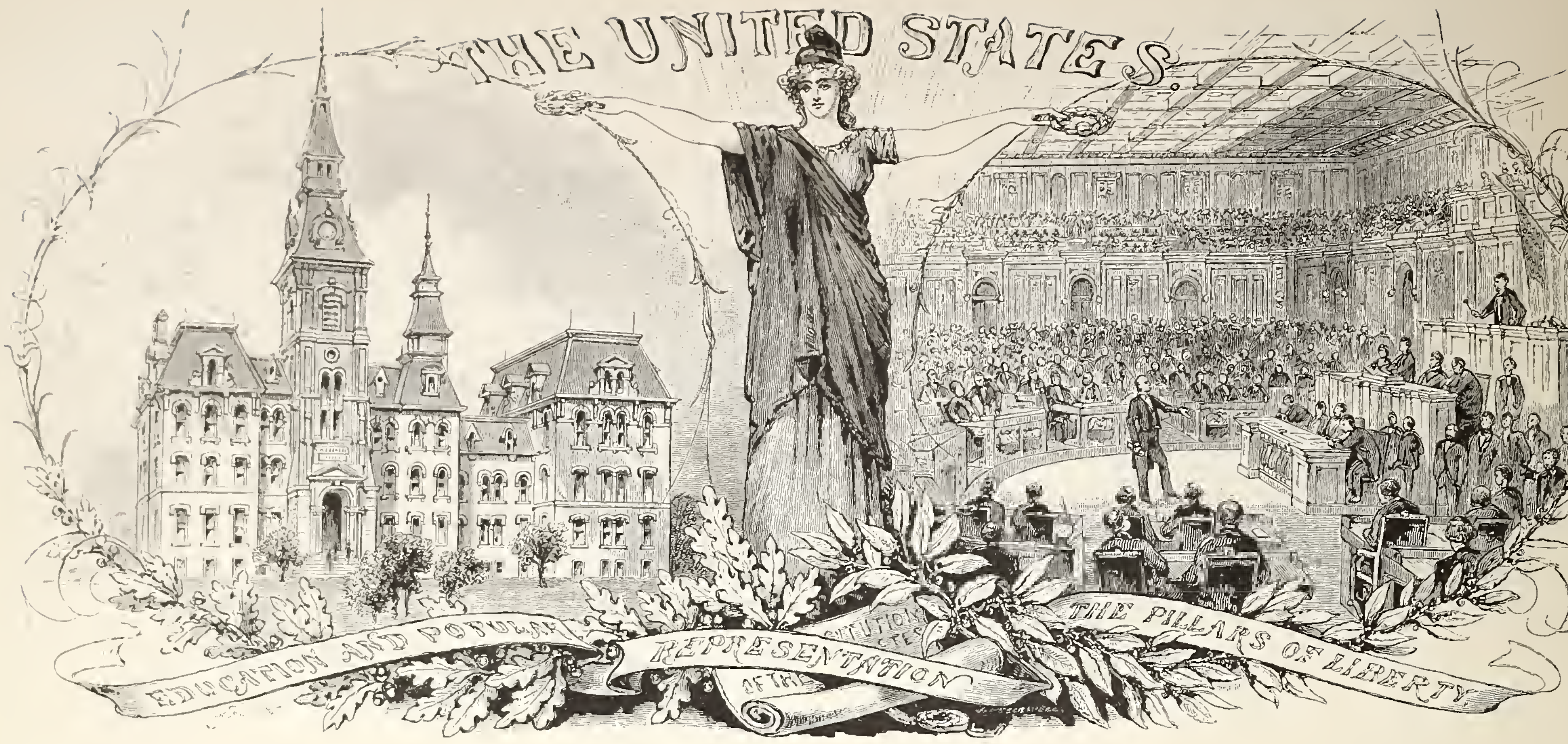
Name the peninsular province. What are leading occupations in Nova Scotia? What are the chief agricultural and mineral products? What is the capital? Describe Halifax. What is remarkable about the Bay of Fundy? Relate the story of the Acadians. Which is the island province? Tell all you know about Prince Edward Island.

State what you can about the early history of Canada; its recent railroad enterprises; its commercial rank. Of the exports of Canada, the grain and flour are mainly from what province? Where do the forest products come from? The furs? The fish? The minerals?

REVIEW OF THE CANADIAN PROVINCES.

Name.	Square Miles.	Population in 1881.	Capital.	Population of Capital in '81.	Largest Town.
Brit. Columbia.	356,000	60,000	Victoria	('76) 5,293	Victoria
Manitoba......	13,969	49,509	Winnipeg	11,000	Winnipeg
Ontario........	107,780	1,913,460	Toronto	86,445	Toronto
Quebec........	193,355	1,358,469	Quebec	62,446	Montreal
New Brunswick	27,322	331,129	Fredericton	6,218	St. John
Nova Scotia....	21,731	440,585	Halifax	36,102	Halifax
Prince Edward.	2,173	107,781	Charlottet'n	10,807	Charlottet'n

THE UNITED STATES.



GENERAL DESCRIPTION.

Area, including Alaska, 3,602,990 square miles. Population, about 50,250,000.

Situation.—Extent.—The United States (exclusive of Alaska, already described) occupies the middle portion of North America. It extends from the Atlantic Ocean to the Pacific, and from the Dominion of Canada to Mexico and the Gulf of Mexico. Its greatest length, across the continent from Cape Cod, is about 2,800 miles. Its greatest width, from the southern extremity of Texas to Canada, is about 1,600 miles. It is nearly as large as the whole of Europe.

The United States is the leading country of the New World, and in wealth, importance, and enlightenment, ranks with the great powers of the Eastern Continent.

Advantages.—The United States, lying in the southern half of the North Temperate Zone, has a climate most favorable for developing fertility in the soil, and industry in the people. Its extent and variety of surface insure a variety of productions.

The numerous indentations on the Atlantic coast afford good harbors where they are most needed for foreign commerce. Navigable rivers open markets to the interior, and with the Great Lakes on the border furnish admirable facilities for domestic trade. The descent in many streams, as they break from the highlands on their way to the ocean, supplies abundant water-power for manufacturing purposes. Finally, its vast coal-fields, its iron widely distributed, its copper and lead, and the rich deposits of gold and silver in its mountainous regions, make the United States a treasury of mineral wealth.

Inhabitants.—A hundred years ago the United States had less than 3,000,000 inhabitants; now it has more than 50,000,000. No other country has ever increased in population so rapidly. The wilderness has given place to thriving farms; small hamlets have grown into great cities.

Much of this rapid growth is due to immigration. Thousands, attracted by the superior advantages of the United States, have flocked thither from the Old World, particularly from Ireland and Germany. Nearly one-seventh of the population are of foreign birth. The Mongolian race is represented by a large number of Chinese, who have found their way mainly to the Pacific coast. The native stock is principally of English descent.

The population includes about 6,580,000 colored persons and 380,000 Indians. Most of the former live in the South, and were slaves till 1865, when slavery was abolished. Some of the Indians have become civilized, but the greater part keep together in tribes and preserve in some degree their wild habits. They live in the most thinly-settled regions, where lands have been reserved to them by the Government. From time to time difficulties arise, which lead to Indian wars.

The eastern part of the country is the most densely peopled. The present center of population is marked on the map of the United States, p. 31. It will be found in the northern part of Kentucky, much nearer to the eastern coast than to the western.

Education.—Liberal provision is made by almost every state, for the education of the people. Common schools are maintained at the public expense, and in some cases high schools and academies, besides normal schools for preparing teachers. For imparting a higher education, there are about five hundred and fifty colleges, two hundred of which are exclusively for women.

Religion.—There is no established church. Freedom of religious belief and worship is secured to all.

How composed.—The United States is composed of thirty-eight States, ten Territories, and one District. Each state is a republic, and regulates its own local affairs—makes and executes its own laws, levies taxes, controls its militia except when they are in the service of the General Government, etc.

Questions.—How is the United States situated? Between what does it extend? What is its greatest length? Its greatest width? Enumerate the advantages that the United States possesses. Which coast is most indented? (*See map, p. 31.*) Mention some of the bodies of water that indent the eastern coast. Name eight lakes that lie on the northern boundary. Name eight of the large rivers. On what body of water is the coast-line longest?

What is the population of the United States? Show how it has grown. To what is much of this growth due? Who are included in the population? What part is the most thickly inhabited? What provision is made for education? What is allowed in religious matters? Of what is the United States composed? What is each state? What powers does each state exercise?

GOVERNMENT AND HISTORY.

The General Government.—The United States, formed by the union of thirty-eight states, is a Federal Republic. *Federal* means *united under a compact.*

The Federal or General Government regulates all affairs that belong to the nation at large; such as maintaining an army and a navy, declaring war, defending the country, concluding treaties, regulating foreign commerce, coining money, etc.

The Constitution.—The government is administered in accordance with the Constitution of the United States, established in 1788. This instrument recognizes three branches of government: the Legislative, which makes the laws; the Judicial, which interprets the laws; and the Executive, which executes the laws.

The legislative power is vested in Congress, which meets at Washington every year, on the first Monday of December. Congress consists of two houses, the Senate and the House of Representatives. The former is composed of two senators from each state, chosen by the legislature for terms of six years. The representatives are elected by the people for terms of two years, the number from each state being proportioned to its population.

The judicial power is vested in a Supreme Court and such inferior courts as are established by Congress. The judges are appointed by the President with the consent of the Senate.

The executive power is vested in a President, who, with a Vice-President, is elected every four years by *electors* chosen by the people.

The State Governments are like the General Government in form. Each state has its own Constitution. The states are generally divided into Counties, and the counties into Townships.

In most of the states the executive power is vested in a Governor, a Lieutenant-Governor, a Secretary of State, a Comptroller or Treasurer, an Attorney-General, and a Superintendent of Schools, all of whom are generally elected by the people. Some of the states have, besides, an Auditor, a Land Commissioner, and other executive officers.

The legislative power is vested in a legislature of two houses, called the Senate, and the House of Representatives, Assembly, or House of Delegates; the members of these houses are also elected by the people.

The judicial power is exercised by courts variously named. The judges are generally elected by the people, but in some cases appointed by the Governor or the Legislature.

The Territories are under the control of the General Government. When a government is provided for a territory, the latter is said to be *organized.* The President appoints the Governor, Secretary, and Judges, while the legislature is chosen by the inhabitants. The laws made by the territorial legislatures are subject to revision by Congress.

Each territory is represented in the lower house of Congress by one delegate, who is entitled to speak on matters pertaining to his territory, but not to vote. Territories are admitted as states when they have a sufficient number of inhabitants.

Historical Facts.—The United States was originally formed of thirteen British colonies on the Atlantic coast, which in 1776 declared their independence of the mother-country. Great Britain claimed the right of taxing them, though they were not represented in the British Parliament; and attempts to enforce this claim brought on the Revolutionary War (1775–1783). The Americans were successful, and at the close of the war the United States extended to the Mississippi River on the west, and as far south as Florida (*see map in the opposite column.*)

The country has since been enlarged by the addition of the Louisiana Purchase, Florida, Texas, and large tracts ceded and sold by Mexico. The extent of these tracts and the dates of their acquisition are shown in the map below. From these additions, states and territories have from time to time been formed.

Questions.—Why is the United States called a *Federal Republic?* What matters are regulated by the Federal Government? What instrument provides for the administration of the government? How many branches are recognized? In what body is the legislative power vested? Of what does Congress consist? How is the Senate composed? The House of Representatives? In what is the judicial power vested? By whom are the judges appointed? In whom is the executive power vested?

Describe the state governments. Into what are the states generally divided? When is a territory said to be *organized?* What territorial officers are appointed by the President? By whom is the legislature chosen? How are the territories represented in Congress? How was the United States originally formed? What was the cause of the Revolution? At the close of the Revolutionary War, how far did the United States extend? What additions have since been made?

CLASSIFICATION OF THE STATES.

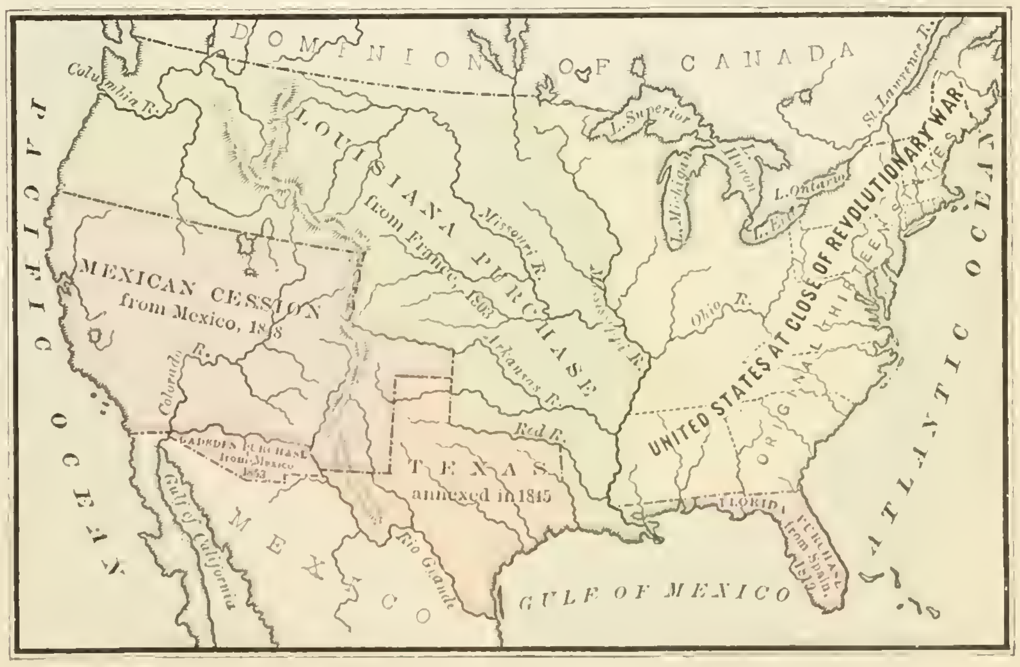
The thirty-eight states may be arranged, according to their situation and similarity of characteristics, in seven groups:—

New England States.	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.
Middle Atlantic States.	New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia.
Southern States.	North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Ar'kansas (*saw*), Tennessee.
Central States.	Kentucky, Missouri, Kansas.
North Central States.	Ohio, Indiana, Illinois, Michigan, Wisconsin, I'owa, Minnesota, Nebraska.
Rocky Mountain State.	Colorado.
Pacific States.	Oregon, California, Nevada.

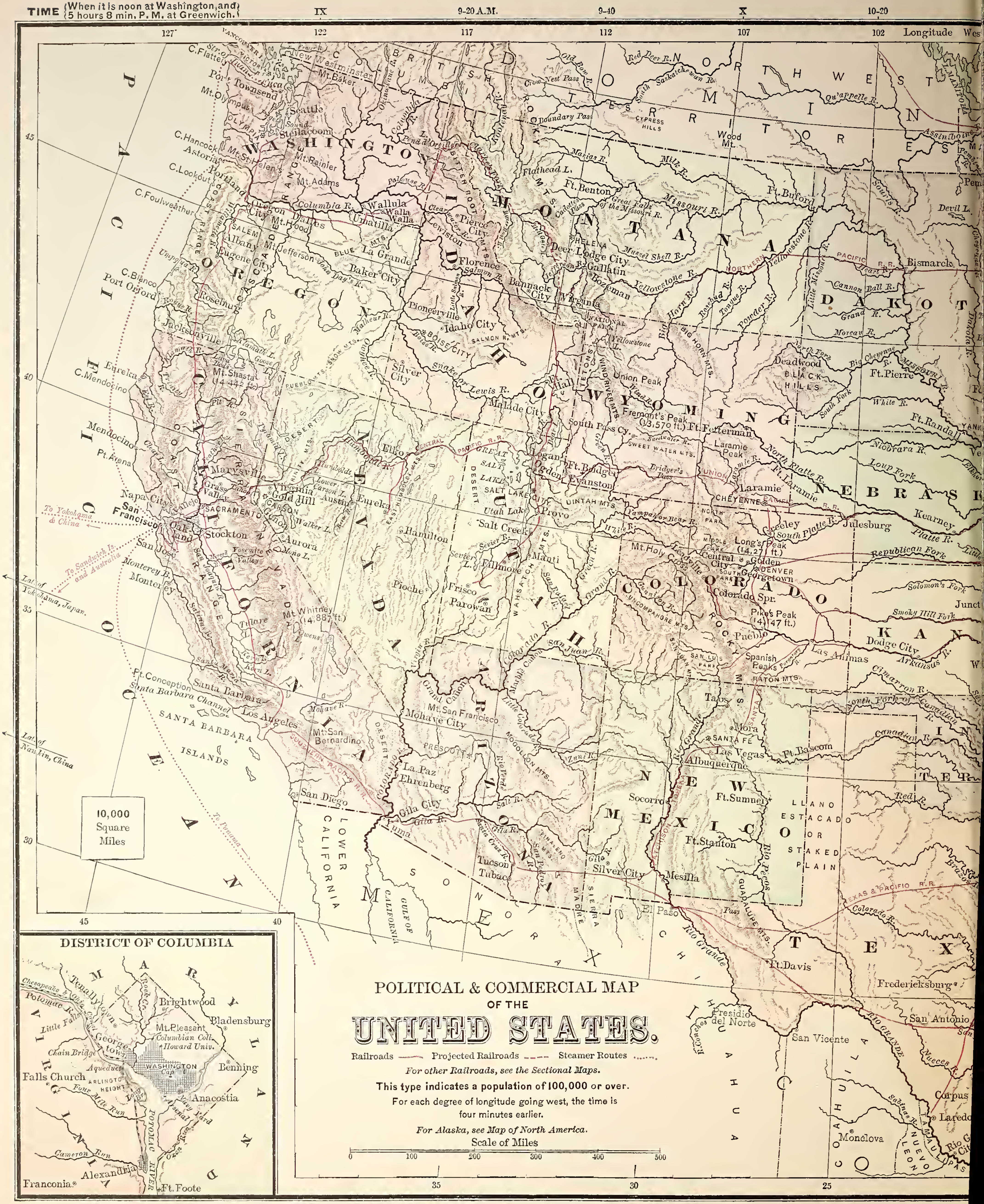
TERRITORIES.

DAKOTA.	In North Central group.
WASHINGTON, I'DAHO, MONTANA, WYO'MING, UTAH, NEW MEXICO, ARIZONA.	Grouped with the Pacific States and the Rocky Mountain State.
INDIAN.	Unorganized; treated with the Southern States.
ALASKA.	Unorganized; shown on Map of North America.

DISTRICT OF COLUMBIA.



MAP SHOWING THE ORIGINAL TERRITORY OF THE UNITED STATES AND SUBSEQUENT ACQUISITIONS.



POLITICAL & COMMERCIAL MAP
OF THE
UNITED STATES.

Railroads —— Projected Railroads – – – Steamer Routes ……

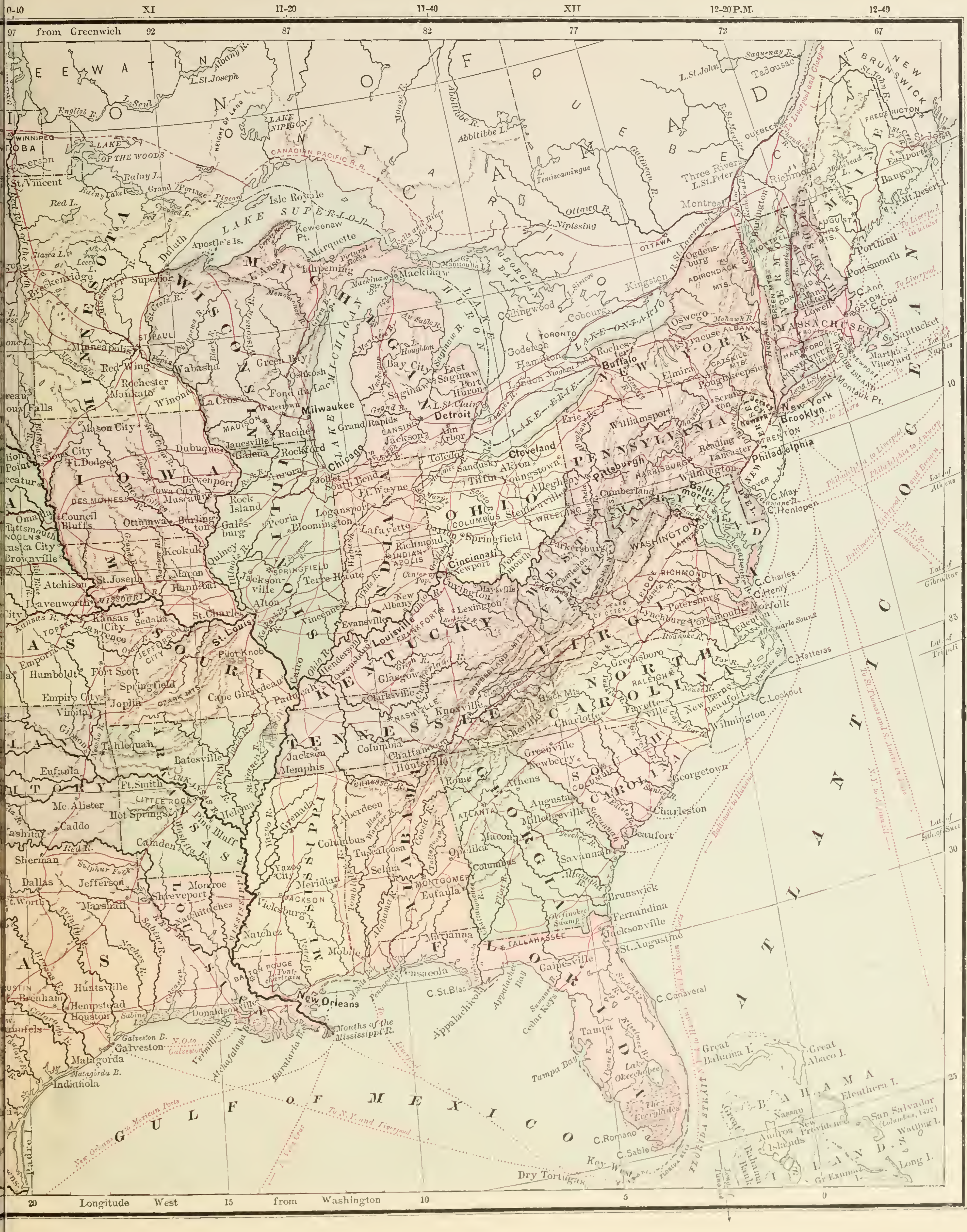
For other Railroads, see the Sectional Maps.

This type indicates a population of 100,000 or over.

For each degree of longitude going west, the time is four minutes earlier.

For Alaska, see Map of North America.

Scale of Miles
0 100 200 300 400 500



0-40
XI
11-20
11-40
XII
12-20 P.M.
12-40
97
from Greenwich
92
87
82
77
72
67
20
Longitude
West
15
from
Washington
10
5
0
40
35
30
25
DOMINION OF CANADA
KEEWATIN
ONTARIO
QUEBEC
NEW BRUNSWICK
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ERIE
LAKE ONTARIO
GEORGIAN BAY
LAKE NIPIGON
LAKE OF THE WOODS
CANADIAN PACIFIC R.R.
MINNESOTA
WISCONSIN
MICHIGAN
IOWA
ILLINOIS
INDIANA
OHIO
PENNSYLVANIA
NEW YORK
VERMONT
NEW HAMPSHIRE
MAINE
MASSACHUSETTS
CONNECTICUT
RHODE ISLAND
NEW JERSEY
DELAWARE
MARYLAND
WEST VIRGINIA
VIRGINIA
KENTUCKY
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
GEORGIA
FLORIDA
ALABAMA
MISSISSIPPI
LOUISIANA
ARKANSAS
MISSOURI
KANSAS
INDIAN TERRITORY
TEXAS
ATLANTIC OCEAN
GULF OF MEXICO
BAHAMA ISLANDS
FLORIDA STRAIT
Great Bahama I.
Great Abaco I.
Eleuthera I.
Nassau
New Providence
Andros Islands
San Salvador (Columbus, 1492)
Watling I.
Long I.
Great Bahama Bank
Gt. Exuma I.
Winnipeg
St. Vincent
Duluth
Superior
Marquette
Ishpeming
Isle Royale
Keweenaw Pt.
Apostle's Is.
Mackinaw
St. Paul
Minneapolis
Red Wing
Winona
Rochester
Mankato
La Crosse
Green Bay
Oshkosh
Fond du Lac
Madison
Watertown
Milwaukee
Racine
Janesville
Chicago
Joliet
Aurora
Rockford
Galena
Dubuque
Davenport
Rock Island
Iowa City
Muscatine
Des Moines
Burlington
Ottumwa
Keokuk
Council Bluffs
Omaha
Sioux City
Ft. Dodge
Mason City
Peoria
Bloomington
Galesburg
Quincy
Springfield
Jacksonville
Alton
St. Louis
St. Charles
Hannibal
Macon
St. Joseph
Atchison
Leavenworth
Kansas City
Topeka
Lawrence
Sedalia
Jefferson City
Emporia
Humboldt
Fort Scott
Joplin
Pilot Knob
Cape Girardeau
Cairo
Paducah
Evansville
Vincennes
Terre Haute
Lafayette
Logansport
Indianapolis
Richmond
South Bend
Ft. Wayne
Toledo
Detroit
Ann Arbor
Jackson
Lansing
Grand Rapids
Saginaw
East Saginaw
Bay City
Port Huron
Sandusky
Cleveland
Akron
Youngstown
Tiffin
Columbus
Dayton
Springfield
Cincinnati
Newport
Covington
Portsmouth
Maysville
Lexington
Frankfort
Louisville
New Albany
Owensboro
Henderson
Glasgow
Clarksville
Nashville
Knoxville
Chattanooga
Columbia
Jackson
Memphis
Huntsville
Pittsburgh
Allegheny
Steubenville
Wheeling
Parkersburg
Charleston
Erie
Buffalo
Rochester
Syracuse
Oswego
Albany
Elmira
Williamsport
Harrisburg
Reading
Lancaster
Philadelphia
Trenton
Wilmington
Baltimore
Annapolis
Washington
Cumberland
Richmond
Petersburg
Lynchburg
Norfolk
Portsmouth
New York
Brooklyn
Newark
Poughkeepsie
Scranton
Hartford
Providence
Newport
Boston
Lowell
Manchester
Concord
Portsmouth
Portland
Augusta
Bangor
Eastport
Montpelier
Burlington
Montreal
Quebec
Three Rivers
Ottawa
Kingston
Toronto
Hamilton
London
Goderich
Collingwood
Cobourg
Ogdensburg
Fredericton
St. John
Tadousac
Greensboro
Raleigh
Fayetteville
Charlotte
New Berne
Beaufort
Wilmington
Columbia
Newberry
Greenville
Georgetown
Charleston
Beaufort
Augusta
Athens
Atlanta
Rome
Milledgeville
Macon
Savannah
Columbus
Brunswick
Montgomery
Selma
Tuscaloosa
Opelika
Eufaula
Mobile
Meridian
Columbus
Aberdeen
Vicksburg
Jackson
Natchez
Yazoo City
Grenada
Pensacola
Marianna
Tallahassee
Fernandina
Jacksonville
St. Augustine
Gainesville
Cedar Keys
Tampa
Tampa Bay
Lake Okeechobee
The Everglades
C. Canaveral
C. Romano
C. Sable
Key West
Dry Tortugas
C. St. Blas
Apalachicola
New Orleans
Baton Rouge
Donaldsonville
Mouths of the Mississippi R.
Shreveport
Natchitoches
Monroe
Little Rock
Hot Springs
Pine Bluff
Helena
Camden
Batesville
Ft. Smith
Tahlequah
Vinita
Eufaula
Mc. Alister
Caddo
Sherman
Dallas
Jefferson
Marshall
Ft. Worth
Huntsville
Hempstead
Brenham
Houston
Galveston
Matagorda
Indianola
C. Hatteras
C. Lookout
C. Henry
C. Charles
C. May
C. Henlopen
C. Ann
C. Cod
Nantucket I.
Martha's Vineyard I.
Montauk Pt.
Mt. Desert I.
Albemarle Sound
Pamlico Sd.
ADIRONDACK MTS.
CATSKILL MTS.
GREEN MTS.
WHITE MTS.
BLUE RIDGE
OZARK MTS.
CUMBERLAND MTS.
Black Mts.
PEAKS OF OTTER
Okefinokee Swamp
To Liverpool and Glasgow
To Liverpool in winter
To Liverpool
N.Y. to Liverpool
Philadelphia to Liverpool
Philadelphia to Antwerp
Baltimore to Liverpool and Bremen
Baltimore to Havana
N.Y. to Bermuda
N.Y. to St. Thomas and St. Louis in Brazil
N.Y. to Aspinwall
New Orleans to Mexican Ports
To N.Y. and Liverpool
N. O. to Galveston
To Vera Cruz
Lat. of Athens
Lat. of Gibraltar
Lat. of Tripoli
Lat. of Isth. of Suez
Lat. of Naples

MAP QUESTIONS ON THE UNITED STATES.

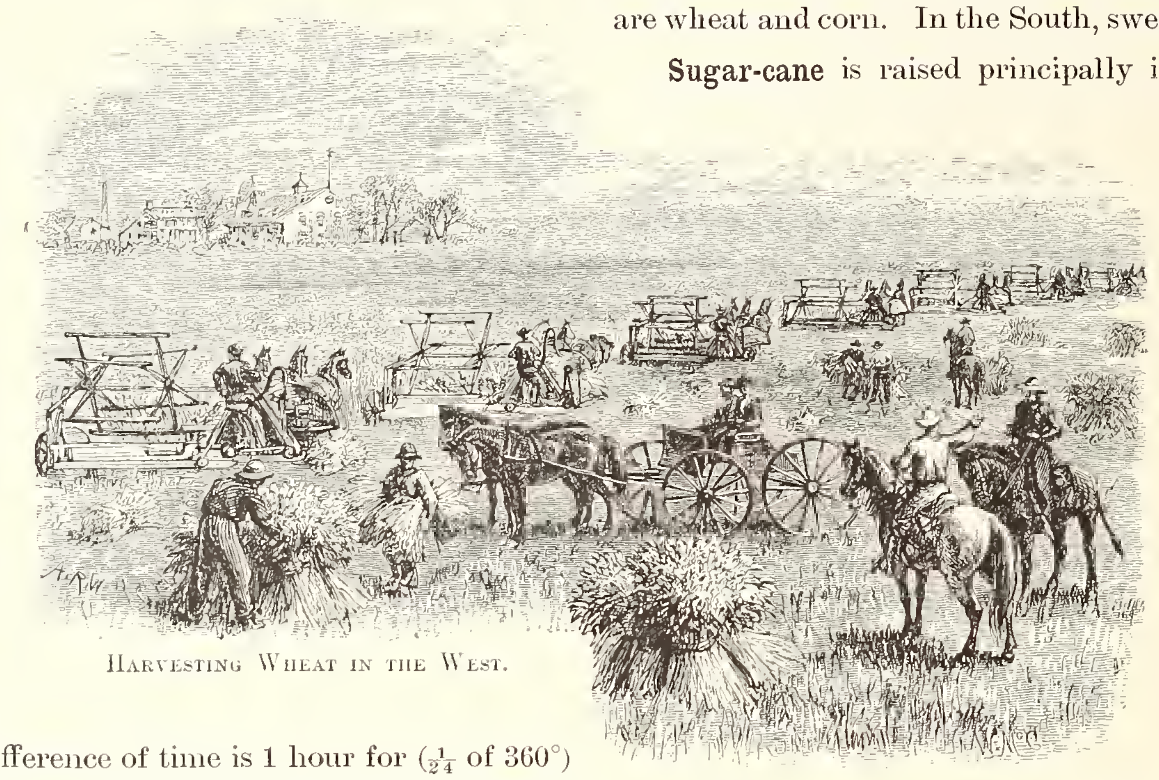
(Refer to Table on p. 29 and Map on pp. 30, 31.)

Name the six New England States. In what part of the United States are they? On what ocean? Name the seven Middle Atlantic States. In what part of the United States are they? What district is surrounded by the Middle Atlantic States? *(See small map in lower left-hand corner.)* What city is in the District of Columbia? What is Washington? *The capital of the United States.* Find Washington on the large map. Describe its situation.

Name the ten Southern States. In what part of the United States are they? On what bodies of water? Which of the Southern States are east of the Mississippi River? Which are west of the Mississippi? Name the three Central States. In what part of the country do they lie? In what direction are the Central States from the Southern States?

Name the eight North Central States. What part of the United States do they occupy? What lakes are on their northern border? Name the Rocky Mountain State. In what part of the United States is Colorado (*kol-o-rah'do*)? In what direction from Washington? Mention the three Pacific States. How are they situated?

Name the ten territories. Which partakes of the character of the Southern States? Which is most like the North Central States? Which is separated from the rest of the United States? How is Washington Territory situated? How are the six remaining territories situated? How are the state capitals distinguished from other cities on the map? What four capitals are in about the same latitude as Washington City? In going west from Washington to the Pacific, through what states and territories would you pass?


Harvesting Wheat in the West.

Difference of Time.—The figures over the map show the time at places on the several meridians, when it is noon at Washington. The sun is then over the meridian of Washington; at places farther east it is afternoon, for the sun has passed their meridian; at places farther west it is forenoon, for the sun has not yet reached their meridian. As the sun appears to move 360° in 24 hours, the difference of time is 1 hour for ($\frac{1}{24}$ of 360°) 15°, or 4 minutes for every degree. When it is noon at Washington, about what o'clock is it at Eastport, Maine? At Augusta, Georgia? At San Francisco, California? At Salt Lake City, Utah?

AGRICULTURE AND MANUFACTURES.

Agriculture, on which depends the supply of food and of many articles with which manufactures and commerce have to deal, is the leading branch of industry in the United States. It employs nearly one-half of the whole number engaged in different occupations throughout the country.

Except in and near the mountainous sections, the soil of the United States is for the most part remarkably fertile—especially in the Mississippi Valley. The yield of agricultural products is enormous; after home wants are supplied, large quantities remain for export. For cotton and grain, the United States is the chief source of supply to countries that need them.

The Physical Map of the United States, pp. 34, 35, shows the regions specially distinguished for important agricultural products.

Indian corn, or maize, is the most valuable grain-crop. About 1,717 millions of bushels have been produced in a year. Corn is fed in large quantities to hogs, cattle, and horses, and is also used in the distillation of whisky. It is believed that the stalks will soon be made available for the production of sugar. Illinois is the leading corn state.

Wheat is the second grain-crop in value, and the first in importance as an export. The product has exceeded 490 millions of bushels in a single year. The prairie-lands of the North Central States and of Dakota Territory are unsurpassed in richness, and contain some wheat-farms of from five to fifteen thousand acres. A hundred reaping-machines are sometimes owned on a single farm, each of which, drawn by three horses or mules, will cut fifteen acres a day *(see engraving below)*. The superintendent, with two assistants, rides on horseback along the line, ready to supply hammers, nuts, screws, etc., for repairs. The reaping-machines, besides cutting the wheat, bind it in bundles and toss it on the ground. Shockers follow, setting up the bundles, that they may ripen before threshing.—California is noted for the excellent quality of its wheat, and in 1878 it produced more than any other state.

Oats are in this country used mostly as food for animals; the crop about equals that of wheat in quantity, though not in value. Barley, rye, buckwheat, and rice, rank next. Barley is made into malt, which is used in the manufacture of beer; and from rye, whisky is distilled. Rice is not raised in sufficient quantity for home needs.

Grass and hay, supporting thousands of sheep, horses, and cattle, are of prime importance, particularly in the North. Potatoes are also a leading northern crop; they are used in the manufacture of starch, as also are wheat and corn. In the South, sweet-potatoes are a staple product.

Sugar-cane is raised principally in Louisiana. Parts of Georgia, Texas, and Florida, produce the cane in limited quantities; but as yet the United States has to depend mainly on foreign countries for its supply of sugar. Sorghum, which yields molasses and has begun to be used for the manufacture of sugar, is largely cultivated in Missouri, and the North Central States, especially Minnesota.

Cotton is raised in the Southern States, in some years to the extent of about six million bales of 450 pounds each. Texas has lately taken the lead in the production of this staple. Tobacco is cultivated over a large extent of country, but in detached districts; Kentucky, Virginia, and Ohio, are great tobacco-raising states. The yearly crop amounts to about four hundred and fifty millions of pounds.

Manufactures afford employment to nearly one-third as many persons as are engaged in agriculture. In manufacturing, machinery is generally used; and this is moved either by water-wheels where the descent in a river affords sufficient power, or, as is more usual in the large cities, by steam.

The New England States, New York, and Pennsylvania, are great seats of manufacturing industry. In the newly-settled states and in the South, manufactures receive less attention; but they are increasing in all sections, and the United States is now exporting various manufactured articles which it formerly imported.

Flouring and grist-mill products, iron and iron manufactures, cotton and woolen goods, lumber, clothing, boots and shoes, leather, and furniture, are among the principal manufactures.

Questions.—What is the leading branch of industry in the United States? What proportion of the whole number that have occupations are engaged in agriculture? Describe the soil and its yield. For what products is the United States the chief source of supply? Which is the most valuable grain-crop? How much corn has been produced in a year? What use is made of corn? Which is the leading corn state?

What is the most important grain for export? How large has the product of wheat been in a single year? Where are rich prairie-lands? Describe a great wheat-farm. What Pacific state is noted for its wheat? Mention what you know about the oat-crop. What grains rank next? For what are large quantities of barley and rye used? What makes grass and hay of great importance? What is said of the potato-crop? What are used in manufacturing starch?

Where is sugar-cane principally produced? What do we get from sorghum? Where is sorghum raised? Where is the cotton region? How much cotton has been raised in some years? What state has lately taken the lead in producing cotton? Where is tobacco produced, and how large is the crop? How do the manufacturers compare in number with those engaged in farming? How is machinery moved? Give an account of manufacturing industry in the United States.

COMMERCE AND MINING.

Foreign Commerce.—Commerce is among the foremost industries of the United States. In foreign commerce, this country is surpassed only by Great Britain and Germany.

Of the exports, more than half go to Great Britain. France, Germany, Belgium, and Canada, take the greatest portions of the remainder. The chief exports are breadstuffs, cotton, provisions, petroleum, tobacco, live cattle, and various manufactures.

Of the imports, sugar, which is the largest, comes chiefly from the West Indies, and coffee from Brazil. Cotton and woolen goods are imported mainly from Great Britain, and silk dress goods from France. Hides we get from South America, tea from China and Japan, and tin in plates from England.

American vessels carry nearly one-sixth of the exports and imports, and foreign vessels the remainder. About half of the foreign commerce centers at New York. Boston, New Or'leans, Philadelphia, Baltimore, and San Francisco,* the commercial metropolis of the Pacific coast, divide among themselves most of the other half.

Domestic Commerce.—The domestic commerce of the United States is of vast magnitude. The cotton, sugar, etc., of the South, the grain, flour, cattle, and packed pork of the West, the lumber of the forest regions, and the products of the mines, are supplied to the thickly-settled manufacturing districts. The latter send back their various manufactures; and the commercial cities distribute to the interior the imports received from abroad.

This interchange of commodities gives rise to a vast carrying-trade, for which railroads, the Great Lakes, the navigable rivers, and canals, afford facilities.

Railroads, bringing the interior districts within reach of markets, have done much to develop the resources of the country. At the beginning of 1882, about 102,250 miles of railroad were in operation. The Atlantic and the Pacific are connected by rail, and some of the states are traversed by iron roads in all directions.

Two lines connecting at Ogden,* in Utah, link the Pacific at San Francisco with the Missouri River at Omaha (*o'ma-haw*) and Council Bluffs. Many of the imports brought to San Francisco in steamers from China and Japan are carried east over these roads.

From Council Bluffs, three trunk lines extend east, through Iowa and Illinois, to Chicago (*shĭ-kaw'go*), and one main line runs southeast to St. Louis. From Chicago, much of the grain and flour produced in the West finds its outlet over several great highways leading to the Atlantic. The most northerly of these railroads crosses Michigan, traverses Ontario, following Lake Ontario and the St. Lawrence River to Montreal, and thence extends to Portland, Maine.

A Manufacturing and Commercial Town.

A second road (the Lake Shore and Michigan Southern) passes through Tole'do, Ohio, whence it follows the south side of Lake Erie to Buffalo. There it joins, 1. The New York Central and Hudson River Railroad, which extends to New York City, and at Albany connects with a road for Boston. 2. The New York, Lake Erie, and Western, which, passing through Elmira, terminates at New York.

A third easterly line from Chicago runs through Fort Wayne, Indiana, to Pittsburgh, Pennsylvania. Here it joins the Pennsylvania Railroad, which has Philadelphia for its eastern terminus. A fourth road, the Baltimore and Ohio, passing through Wheeling, the capital of West Virginia, connects Chicago with Baltimore. The roads just named also have connections with Cincinnati (*sin-sin-nah'tĭ*) and St. Louis.

Other railroads, designed to link the eastern systems with the Pacific coast, are in progress. The Northern Pacific, in operation from Lake Superior as far as the central part of Montana, is to extend to ports in Oregon and Washington. The Southern Pacific establishes communication between San Francisco and El Paso (*pah'so*), on the Rio Grande, where it now meets a trunk line from Texas. It is connected with the Missouri River, at Atchison and Kansas City, by a road which traverses New Mexico, southeastern Colorado, and Kansas.

St. Louis is the busiest railroad center of the Mississippi Valley. Roads diverge from it in all directions, connecting it with Denver in Colorado, with Chicago, with the Gulf of Mexico, with the eastern trunk lines, and with the southeastern Atlantic coast.

The Atlantic ports, Norfolk, Wilmington, Charleston, and Savannah—the Gulf ports, Mobile and Galveston—and New Orleans, near the mouth of the Mississippi, are the termini of important railroads, which transport large quantities of cotton to the seaboard.

The Great Lakes, on which the United States has a shore-line of 3,450 miles, are the seat of an extensive commerce between the different states and with Canada. Hundreds of sailing-vessels and steamboats are busy in transporting grain, flour, lumber, coal, salt, iron-ore, manufactures, etc., from one lake-port to another.

Navigable Rivers are important arteries of trade, since freight can be carried with less expense by water than by rail. The commerce on the Mississippi River and its tributaries is estimated at 2,000 millions of dollars a year. On the upper Mississippi, the principal articles carried are lumber, grain, and flour. On the lower Mississippi, the down-freights are composed of northern products; the up-freights, of sugar, molasses, and cotton, as well as coffee and other foreign products imported through New Orleans.

The down-freights on the Ohio River consist principally of coal from Pennsylvania, West Virginia, and Ohio.

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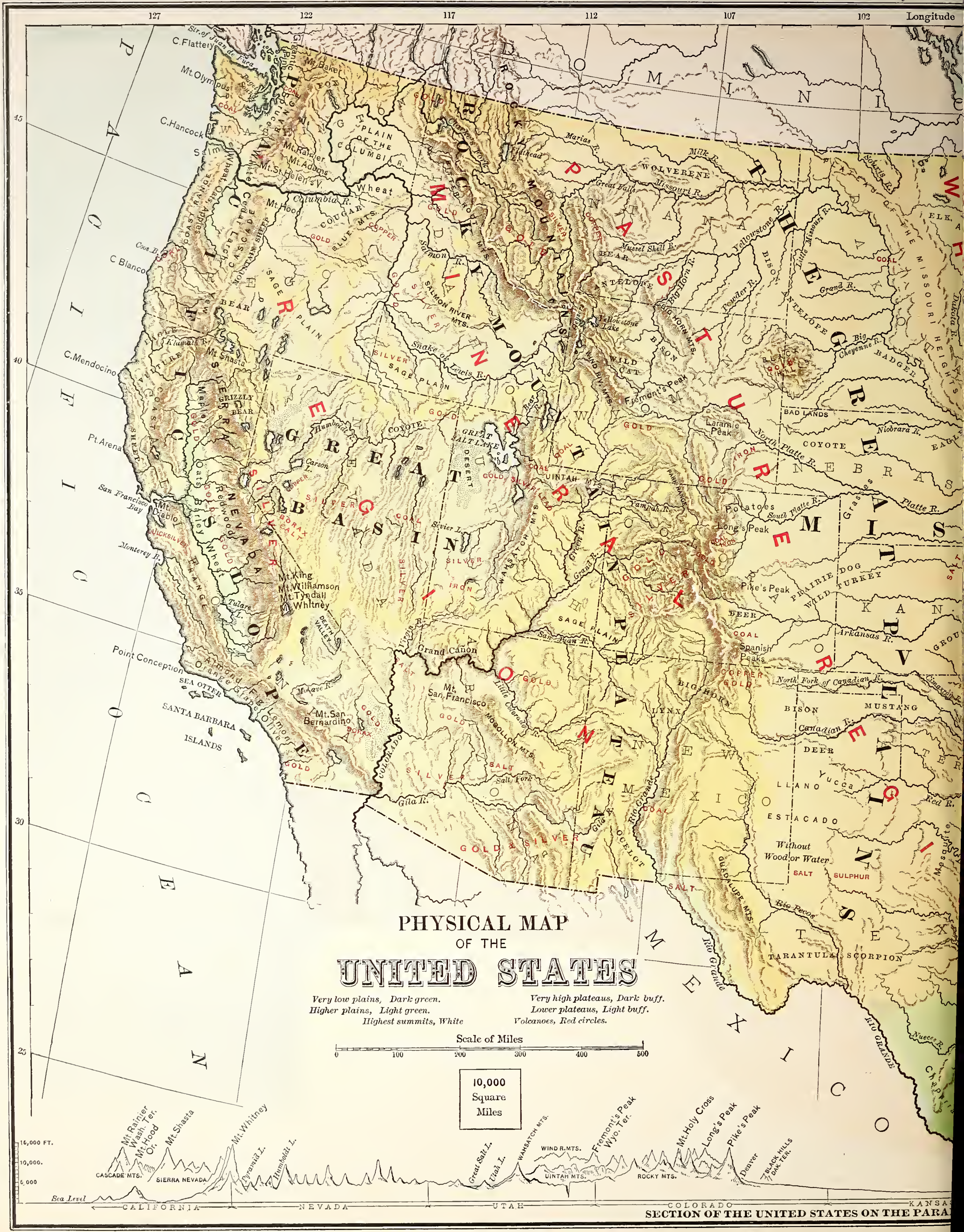
* Find on the Commercial Map of the United States, pp. 30, 31, every place named in this section, and trace the courses of the railroads mentioned.



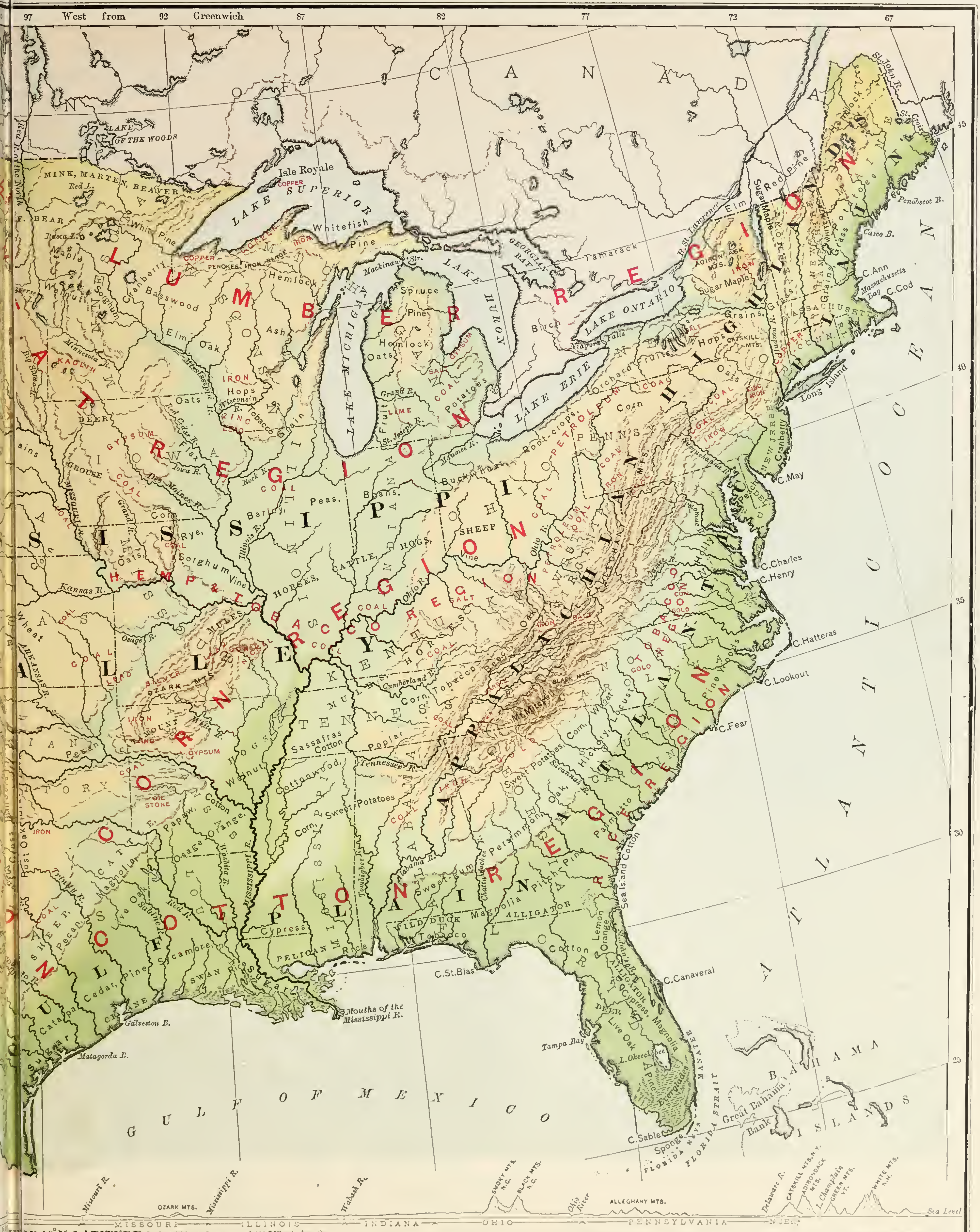
PHYSICAL MAP OF THE UNITED STATES

Very low plains, Dark green.
Higher plains, Light green.
Highest summits, White
Very high plateaus, Dark buff.
Lower plateaus, Light buff.
Volcanoes, Red circles.

Scale of Miles
0 100 200 300 400 500

10,000 Square Miles

SECTION OF THE UNITED STATES ON THE PARA



E OF 40° N. LATITUDE. Scale, 2 Miles in height equal 100 Miles in length.

Canals are less necessary now than they were before the introduction of railroads. The Erie Canal, connecting Lake Erie with the Hudson River, is still important. A short ship-canal in Michigan, around the rapids in the St. Mary's River, which connects Lakes Huron and Superior, enables navigation to be carried on without interruption to the head of the latter lake.

Mining employs, it is estimated, more than 230,000 persons. Most of these are engaged in getting out coal, of which about 65,000,000 tons are produced annually. In this mineral, the United States is the richest country in the world; it has about 300,000 square miles of coal-fields.

Iron-mines are extensively worked. The rest of the mining population are employed in obtaining the ores of the precious metals, lead, copper, quicksilver, etc.

Questions.—How does the foreign commerce of the United States compare with that of other countries? Of what do the exports consist, and where chiefly do they go? What are the principal imports, and where does each come from? What city is the chief center of foreign commerce? What cities rank next to New York in foreign commerce? What may be said of the extent of domestic commerce? What commodities are interchanged? By what is the carrying-trade done?

What has been the effect of railroads? How many miles of railroad are in operation? What is the chief commercial city on the Pacific coast? With what is San Francisco connected, and how? With what city on the east is Council Bluffs connected? Mention the different routes by which Chicago is connected with the Atlantic seaboard by rail. Describe the routes of the partly-completed Pacific railroads. State the principal railroad connections of St. Louis. Give an account of the commerce on the Great Lakes. On the rivers. On the Mississippi. On the Ohio.

What is said of canals as arteries of commerce? Of the Erie Canal? Of the St. Mary's ship-canal? How many persons are engaged in mining? What mineral is most largely mined? How many tons of coal are annually produced? What is the extent of the coal-fields in the United States? What useful metal is most largely mined? What other metals are obtained?

(*Refer to Commercial Map, pp. 30, 31.*) Name some of the important railroad centers of the United States. Through what states and places will a traveler pass, in going by railroad from New York to San Francisco? From Philadelphia to New Orleans? From Portland, Maine, to Leadville, Colorado? From Mobile to Chicago? From Baltimore to St. Paul, Minnesota? From Cincinnati to Boston? From St. Louis to Savannah? From Memphis, Tennessee, to Charleston? Mention some of the principal steamer connections of the Atlantic ports. Of San Francisco.

State the distance between Boston and New York by railroad, and the shortest time required for the journey. *233 miles, 6½ hours.* Between New York and Chicago. *977 mi., 25 h.* Between Chicago and Omaha. *493 mi., 21 h.* Between Omaha and San Francisco. *1,867 mi., 4 days 1 h.* Between New York and San Francisco. *3,337 mi., 6¾ da.* Between New York and St. Louis. *1,065 mi., 34 h.* Between St. Louis and Denver. *921 mi., 43½ h.* Between St. Louis and Chicago. *283 mi. 9¼ h.* Between Chicago and St. Paul. *410 mi., 16½ h.* Between Chicago and New Orleans. *913 mi., 39 h.* Between New York and Washington. *230 mi., 6 h.* Between Washington and New Orleans. *1,160 mi., 47½ h.*

PHYSICAL DIVISIONS AND FEATURES.

Physical Divisions of the United States.—(*Refer to the Physical Map, pp. 34, 35.*) Beginning at the east, we have in succession the Atlantic Plain, gradually ascending toward the west, and continued to the southwest in the Gulf Plain; the Appalachian Highlands; the lowlands of the Mississippi Valley, remarkable for their fertility; the Great Plains, rising by degrees to the base of the Rocky Mountains; the Rocky Mountain Plateau, about a mile in height; and the abrupt Pacific slope.

Map Questions.—In which half of the United States do the low plains mostly lie? Describe the western half, as regards elevation. Does the Mississippi Valley consist of low or high plains? How is the Gulf Plain situated? What states lie wholly or partly in the Gulf Plain? In what physical division does the Great Basin lie? What is peculiar about its rivers?

Regions distinguished for certain products are shown on the Physical Map, as follows:—

1. The Lumber Region.
2. The Wheat Region.
3. The Corn Region.
4. The Hemp and Tobacco Region.
5. The Cotton Region.
6. The Rice Region.
7. The Pasture Region.
8. The Mineral Region.

Map Questions.—In what part of the United States is the lumber region? It includes the northern part of what states? Describe the situation of the wheat region. What Pacific state is noted for its wheat and barley? How is the corn region situated? What region lies along the Missouri and the Ohio? In what part of the Atlantic Plain is there another tobacco region?

Through what physical divisions does the cotton region extend? On the coast of what states is sea-island cotton produced? Where is the rice region? In what states on the Gulf is rice produced? Does rice grow in highlands or lowlands? In what physical division is the great pasture region?

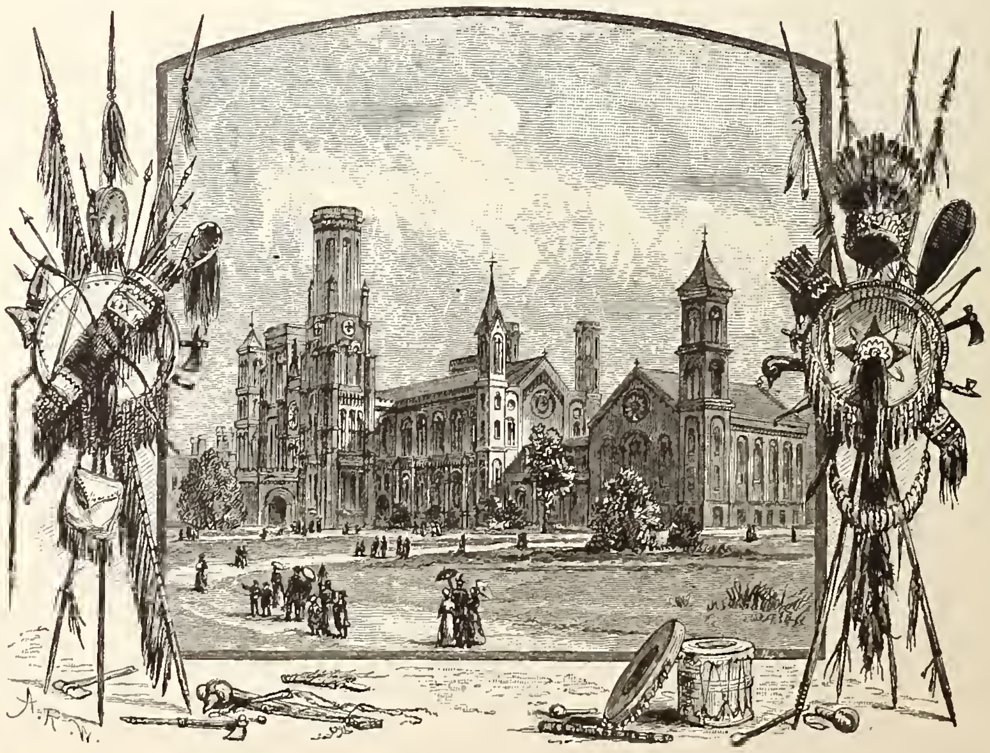
In what parts of the United States are potatoes raised? Sweet-potatoes? What fruits flourish in the southwestern part of the United States, on the Pacific? Mention some of the forest-trees found near the Great Lakes. On what part of the Atlantic coast are pine-woods, yielding turpentine? What trees are found where the Gulf Plain and the Atlantic Plain meet?

Where is the principal mineral region of the United States? What mountains are embraced in it? What minerals are found in it? Are valuable minerals generally found in highlands or lowlands? What minerals are obtained in the Appalachian Highlands? Where is copper principally found? What mineral abounds on both sides of the Mississippi, where three states join? What mineral is obtained in southwestern Missouri?

What fur-bearing animals live in the regions west of Lake Superior? What animals are found on the Great Plains? What birds? What part of the country raises mules, horses, cattle, and hogs, in great numbers? In what state and territory do troops of mustangs, or wild horses, roam? Where is the grizzly bear found? The vulture? On what part of the Pacific coast do salmon abound? What islands are frequented by the sea-otter?

THE DISTRICT OF COLUMBIA.

The District of Columbia is a tract of sixty-four square miles on the left side of the Potomac River. It was ceded to the General Government by the state of Maryland as a site for the national capital.



Smithsonian Institution, Washington.
(Devoted to the diffusion of scientific knowledge.)

Government.—The law-making power for the District is vested in Congress. The executive power is intrusted to three Commissioners appointed by the President. The residents of the District are neither represented in Congress nor entitled to vote.

The City of Washington, the capital of the United States (population, 147,293), was named in honor of the first president, by whom its site was selected. Laid out with broad avenues and for a time sparsely built, it was styled "the City of Magnificent Distances". There are many fine parks, embellished with statues.

The chief ornament of the city is the capitol, built of white marble and covering more than three acres; here Congress meets. Other prominent edifices are the buildings of the several Departments, and the "White House", in which the President lives.

Georgetown, at the head of navigation on the Potomac River, is a suburb of Washington. It is the seat of Georgetown College.

Map Questions.—(*See small map of District, p. 30.*) Bound the District of Columbia. What heights are opposite Washington? What canal, much used for the transportation of coal, has Georgetown for its eastern terminus? With what city of Virginia is Georgetown connected by another canal? What college do you find in Washington? What university? Draw an outline of the District.

(*See map of United States, p. 31.*) What is about the latitude of Washington? Which is farther north, Washington or San Francisco? What is the longitude of Washington? When it is noon at Washington, what o'clock is it at Greenwich, in England? At the capital of Manitoba? To what state-capital is Washington nearest? To what large city? On what waters can you sail from Washington to New Orleans? Point toward Washington. In what direction is Washington from New York?

THE NEW ENGLAND STATES.

Size.—The New England States, called by some from their position the North Atlantic States, form the northeastern extremity of the Union. Their average size is less than that of the states of any other group, all six not embracing one-fiftieth of the area of the United States. There are single states in the West larger than the whole of New England. Rhode Island is the smallest state in the Union.

Map Questions.—(*Refer to map, p. 39.*) Bound New England. Which of the New England States extends farthest north? To about what latitude? Which extends farthest south? To what latitude? Which boundary of Vermont is midway between the North Pole and the Equator? Is the greater part of New England nearer to the North Pole or to the Equator? In what zone is New England? When it is noon at Washington, what o'clock is it at the easternmost point of Vermont? At Boston? Explain the cause of this difference of time.

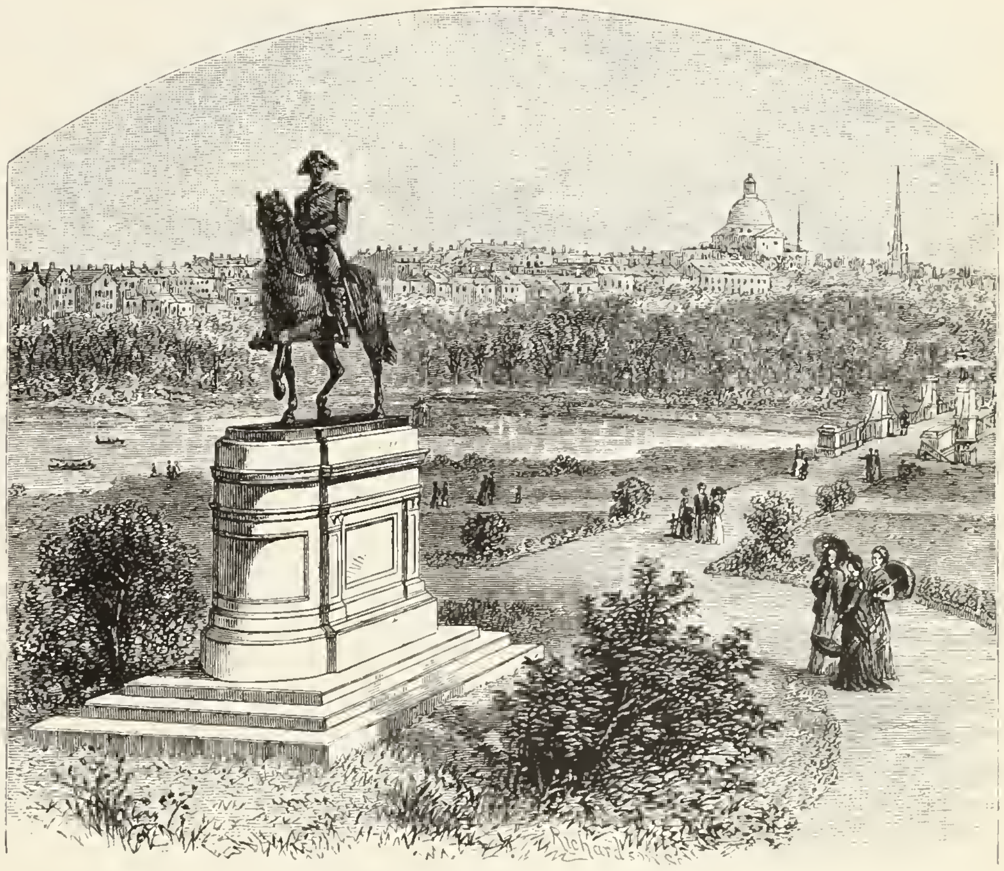
Into what do most of the rivers of New England flow? Name two of its rivers that do not belong to the Atlantic system. In what state are they? Name the longest river of New England. Describe the Connecticut. Name the two rivers next in length. In what state are they? Name the New England States in order, according to their relative length of seacoast. What part of New England is mountainous? Name the most noted cape.

General Description.—New England is situated partly in the Atlantic Plain, here from 50 to 75 miles in width, and partly at the northern extremity of the Appalachian Highlands. The summers are short but hot; the winters are long and cold. The valleys are fertile; but elsewhere the soil is generally rocky, and better adapted to grazing than tillage.

Lying in the grass region, New England produces large crops of hay, together with live-stock, butter, and cheese, in abundance. Potatoes, corn, and oats, are the principal crops; some wheat is raised, but flour has to be imported, and is brought chiefly from the Mississippi Valley. In the north are large forests, containing pine, spruce, hemlock, etc. Lakes and ponds are a beautiful feature of New England scenery.

The 700 miles of seacoast are marked by numerous indentations and well supplied with excellent harbors. These, with railroads, nowhere more closely intersecting the country than in southern New England, afford unsurpassed facilities for commerce. Building-stones, including granite and marble, are abundant; but apart from these there is little mineral wealth.

Historical Facts.—New England was first permanently settled at Plymouth, Massachusetts, in 1620, by "the Pilgrims", who came over from England to the New World, that they might enjoy freedom of religious worship. Other bodies of emigrants following them, several English colonies were formed, which prior to the Revolution had become united in four; viz., New Hampshire (including Vermont), Massachusetts (embracing Maine), Rhode Island, and Connecticut.



Public Garden, Boston.

Consult Palfrey's "History of New England," vol. i., p. 164.

Inhabitants, etc.—The people of New England, like the English forefathers from whom they sprung, are industrious, energetic, and enterprising. They have gone out in great numbers from their native hills, and helped to settle new states. Prizing education, they early established public schools and colleges.

Harvard University, at Cambridge,* Massachusetts, is the oldest college in the United States. Yale College, at New Haven, ranks third in age. Among the other older institutions of New England are Brown University, at Providence; Dartmouth College, at Hanover, New Hampshire; Williams College, at Williamstown, Mass.; Bowdoin (*bo'd'n*) College, at Brunswick, Maine; and the University of Vermont, at Burlington. Wellesley (Mass.) College, and Smith College, at Northampton, Mass., both for women, take a high rank.

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* *Find on the map every place named, here and elsewhere in the text, and describe its situation as it is mentioned, without further directions or questions.*

New England is preëminently the manufacturing region of the United States. Its rivers, particularly the Merrimac, Saco (*saw′ko*), Androscoggin, Kennebec, Penobscot, and Blackstone, afford excellent water-power, and have busy manufacturing cities on their banks.—Describe the six rivers just named.

For the area and population of each state, see Table, p. 64.

Maine has a bold, rocky coast, many excellent harbors, and sparkling lakes which cover nearly one-tenth of the state. Lumbering is largely carried on in the northern forests; Bangor is one of the great lumber-markets of America. Ship-building, for which Bath is noted, fishing and the canning of lobsters, the quarrying of slate and limestone, and ice-cutting (particularly on the Kennebec), are special branches of industry in Maine.

Augusta is the capital. Portland is the metropolis; in winter, when ice closes the St. Lawrence, it is the starting-point of steamships for Liverpool and Glasgow. Lewiston and Biddeford manufacture cotton and woolen goods.

Map Questions.—(*A name underlined on the map denotes the metropolis of the state; heavy-faced letters denote the largest places, brown letters less important places.*) Judging from the course of the rivers, what part of Maine is highest? Where is Mount Katah′din, the highest peak in the state? Name the largest lake of Maine. What lakes are on the boundaries? What rivers? Mention five bays on the coast of Maine. What place is opposite Lewiston? Opposite Biddeford? How is Rockland situated? Where is Mount Desert′ Island?

New Hampshire has but 18 miles of seacoast, and one good harbor—that of Portsmouth. The White Mountains contain summits more than a mile high, and abound in grand scenery. The chief manufactures are woven fabrics, for which Manchester, the largest city of the state, Dover, the oldest city, and Nashua, are distinguished. Concord, the capital, manufactures carriages.

Vermont is distinguished for its dairy products, wool, maple-sugar, and excellent horses. Its Green Mountains give name to the state. Montpelier (*mont-peel′yer*) is the capital. Rutland, the largest town, and Middlebury, are noted for their fine white and variegated marble. Burlington is a lumber-market, and the center of an active trade carried on by rail and on Lake Champlain.

Map Questions.—Bound New Hampshire. Where are the White Mountains? Name three of their peaks. Which is the highest? *Mt. W.* What mountain is southwest of the center of the state? How is Lake Winnipiseogee (*win-ne-pe-sok′ke—smile of the Great Spirit*) situated? Where is Keene? Bound Vermont. What lakes are on its borders? Name three of its chief rivers. Describe the Green Mountains. What is their highest peak? *Mt. M.* How is St. Albans (*awl′banz*) situated? Brattleboro? Bennington?

Massachusetts is the most thickly-peopled state of the Union, and in proportion to population the most largely engaged in manufactures. In the value of manufactured products, it ranks third among the states; in foreign commerce, second.

Boston (population, 362,839), the capital of Massachusetts, is the metropolis of New England, the seat of noted literary institutions, a great railroad center and commercial emporium. It has suburbs of remarkable beauty.

The chief manufacturing cities of Massachusetts are Lowell (cottons and woolens), Worcester (*woos′ter*—an important railroad center and the seat of the College of the Holy Cross), Fall River (prints), Lawrence (cottons, woolens, paper, etc.), Lynn (shoes), Salem (leather), Holyoke (paper, cottons, and woolens), and Taunton (woven fabrics, nails, and machinery). Cambridge is a favorite place of residence. Springfield is the trade-center of western Massachusetts, and the seat of a United States Arsenal. New Bedford and Gloucester (*glos′ter*) are fishing-ports.

Rhode Island ranks next to Massachusetts in density of population. This state has two capitals: Providence, a manufacturing and commercial city; and Newport, a celebrated watering-place, on Rhode Island, in Narragansett Bay. Providence is the second city of New England in population; it receives large quantities of coal and cotton, and ships manufactured goods. Pawtucket and Woonsocket are manufacturing places.

Connecticut is noted for the ingenuity of her people. Rubber goods, hardware, clocks, firearms, and sewing-machines, are specialties among her manufactures. New Haven, Bridgeport, Waterbury, Norwich, and Meriden, are important manufacturing cities. Hartford, the capital, is the seat of Trinity College.

Map Questions.—Bound Massachusetts. Name three bays on the Massachusetts coast. What two large islands belong to Massachusetts? Where is Mount Holyoke (*hole′yoke*)? Where is Amherst, the seat of Amherst College? What places are near Boston (*see small map*)? At the mouth of what river are Cambridge and Boston? Bound Rhode Island. What bay indents the coast? Bound Connecticut. Name its three chief rivers. What large island is south of Connecticut? To what state does Long Island belong? Name the six New England States, with the capital and largest city of each. How are most of the manufacturing places situated, and for what reason?

Questions.—Describe the New England States as a whole, in regard to size—situation—climate—soil—productions—coast—mineral products—early history—inhabitants—colleges—leading industry. Mention what you can about each state and its cities. What are special branches of industry in Maine? Which state ranks first in density of population? Which, second?

* * *

DIRECTIONS FOR DRAWING THE MAP.

Draw the horizontal line AB = 325 miles, and the vertical line AC = 280 miles.

Take AD = 90 mi., DE = 22 mi., EF = 95 mi., AG = 165 mi., GH = 50 mi.

Draw the horizontal lines, GL = 135 mi. and HP = 175 mi.

Draw the vertical lines, FS = 175 mi. and PR = 25 mi.

Take GI = 42 mi.

Take HJ = 78 mi.

Take JN = 23 mi.

Draw DS, BS, BL, and CR.

Draw the following vertical lines :—

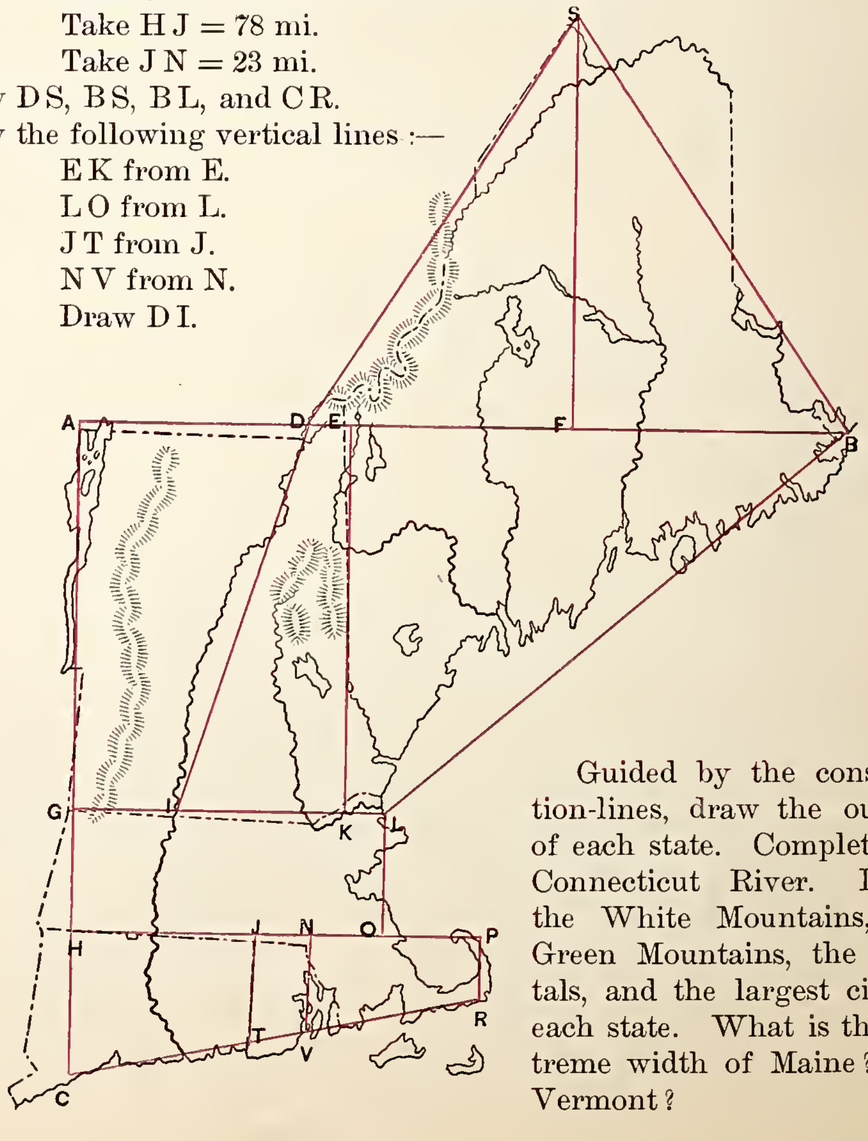
EK from E.

LO from L.

JT from J.

NV from N.

Draw DI.

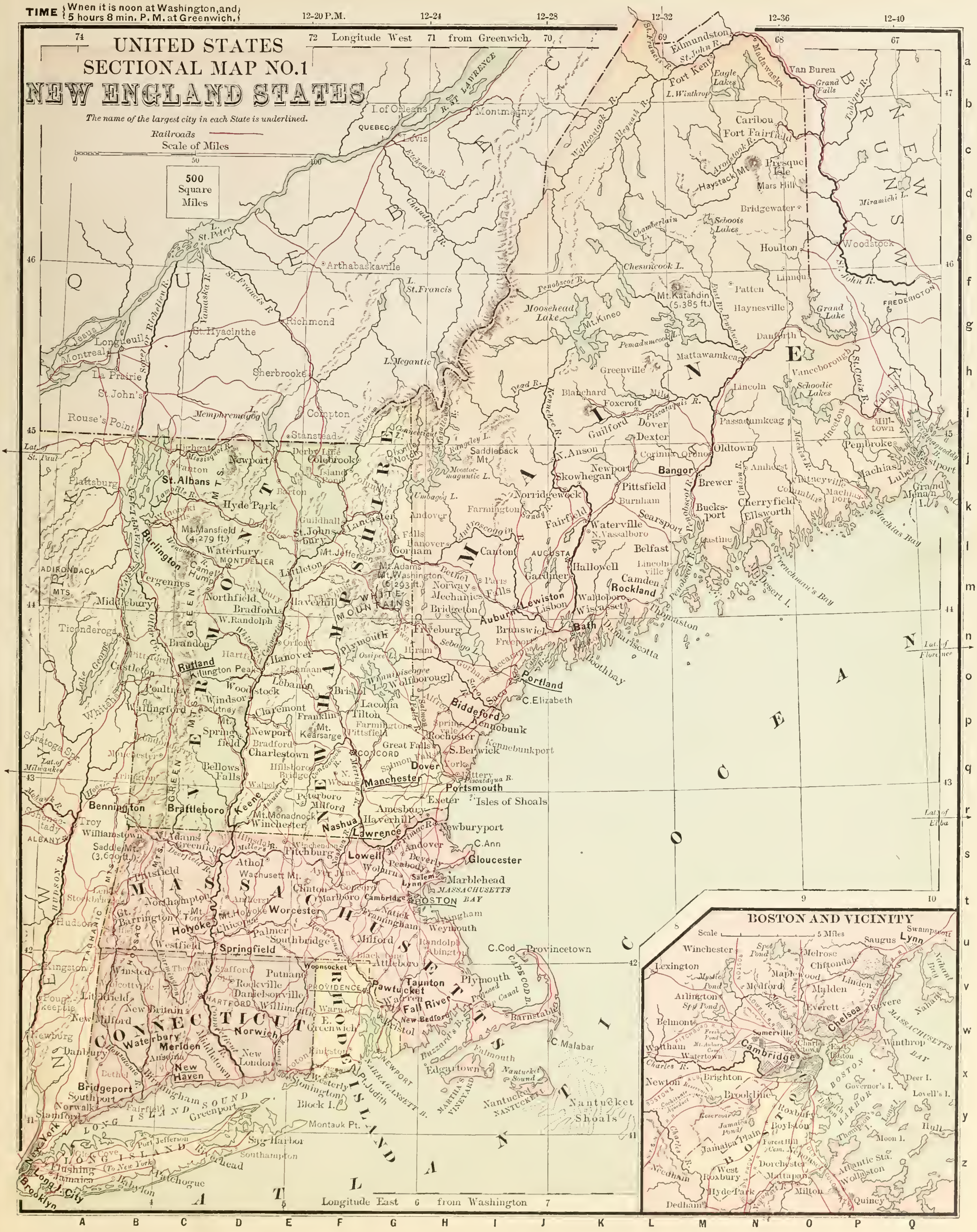


Guided by the construction-lines, draw the outline of each state. Complete the Connecticut River. Insert the White Mountains, the Green Mountains, the capitals, and the largest city of each state. What is the extreme width of Maine? Of Vermont?

TIME { When it is noon at Washington, and 5 hours 8 min. P. M. at Greenwich. }

UNITED STATES SECTIONAL MAP NO. 1
NEW ENGLAND STATES

The name of the largest city in each State is underlined.



THE MIDDLE ATLANTIC STATES.

Lower Part of the City of New York, from the Bay.

On the left is Castle Garden, the landing-depot for immigrants. Next are the Battery Park, and the Staten Island and Brooklyn ferry-houses. The East River Bridge, now in course of construction, is seen on the right. Above the other edifices tower Trinity Church steeple, the Western Union Telegraph building, the Post-Office, etc. Steamboats, ocean-steamers, tugs, ferry-boats, and smaller craft, lend life to the harbor.

Situation.—Size.—The Middle Atlantic States (*see map, p. 43*) lie on or near the Atlantic, between New England and the Southern States. Their average size is more than twice that of the New England States.

Note.—For convenience, the sectional maps are drawn on different scales. This must not mislead the student as to the relative size of the states. Observe that the square denoting 500 square miles is much larger on the map of New England than on that of the Middle Atlantic States. If the scales were the same, New Jersey would appear larger than Massachusetts, as it is, and Maryland larger than New Hampshire. The comparative size of the states is shown on the map of the U. S.

Map Questions.—(*Refer to map, p. 43.*) What states are included in the Middle Atlantic group? Which of these do not border on the Atlantic? Which borders on Canada? Which borders on two of the Great Lakes, and which on but one? Which is the smallest? What state in another group is smaller than Delaware? What states are separated by the Delaware River? What District is on the Potomac? Of what is the Mohawk River a branch?

To what three systems do the rivers of this group belong? In what part are the rivers of the St. Lawrence system? Mention six rivers of these states that belong to the Atlantic system. Into what does the Ohio River flow? (*See map of U. S.*) Into what does the Mississippi flow? To what system do the rivers of West Virginia belong? Describe the Niagara River. Noting the elevation of Lake Erie and of Lake Ontario, tell how many feet the Niagara River descends in its course.

What parts of the Middle Atlantic States are level? Name and describe three bays on the coast. In what direction are these states from the North Pole? From the South Pole? From New England? In what zone are they? Are they nearer the Equator or the Arctic Circle? When it is noon at Washington, what time is it at Niagara Falls? Noting the arrow on the left marginal line, tell which is farther north, San Francisco or Washington; San Francisco or Richmond.

Surface.—The Middle Atlantic States consist partly of lowlands belonging to the Atlantic Plain (*see Physical Map of United States, pp. 34, 35*), and partly of table-land and mountains included in the Appalachian Highlands. The chief mountains connected with the Appalachian System in these states are the Adirondacks and the Catskills in New York, and southwest of the latter the Alleghany Mountains and the Blue Ridge. To the Blue Ridge belong the picturesque Peaks of Otter, in Virginia.—Describe the situation of the mountains just named.

The Adirondacks are the highest mountains of this section. The region near them is dotted with picturesque lakes, and frequented by sportsmen and other summer visitors. All the ranges are covered with forests, which furnish valuable timber.

The coast region is generally sandy, in parts swampy. Dismal Swamp, in southeastern Virginia, bears a thick growth of cypress, cedar, juniper, etc., from which large quantities of shingles and staves are made.

Rivers.—Lakes.—The coast is deeply indented with bays, which receive important rivers and furnish commodious harbors. The Susquehanna River is too shallow to be navigated except in spring; but the Hudson is navigable to Troy, the Delaware for the largest ships to Philadelphia, the Potomac to Georgetown, and the James to Richmond.—Describe these rivers.

In western New York is a remarkable series of long, narrow lakes, some of which are seats of commerce.

Climate.—The climate varies according to latitude and elevation. It is severe in northern New York, cold throughout the mountainous districts, mild and genial in the southern portion lying in and near the Atlantic Plain.

Agricultural Products.—Agriculture is more profitable in this group of states than in New England, the climate being warmer, and the soil more fertile.

Hay is the most valuable crop in New York and Pennsylvania; potatoes are a characteristic product. Of rye and buckwheat, the states just named yield more than any other member of the Union. In dairy products, New York takes the lead.

Oats and barley are extensively cultivated in the north of this section; and corn, wheat, and orchard-fruits, throughout the group. Tobacco is raised, especially in Pennsylvania and Virginia, the latter ranking as the second state of the Union in its production. The hilly regions of New York, Pennsylvania, and West Virginia, afford excellent grazing for sheep, and wool is an important product of these states.

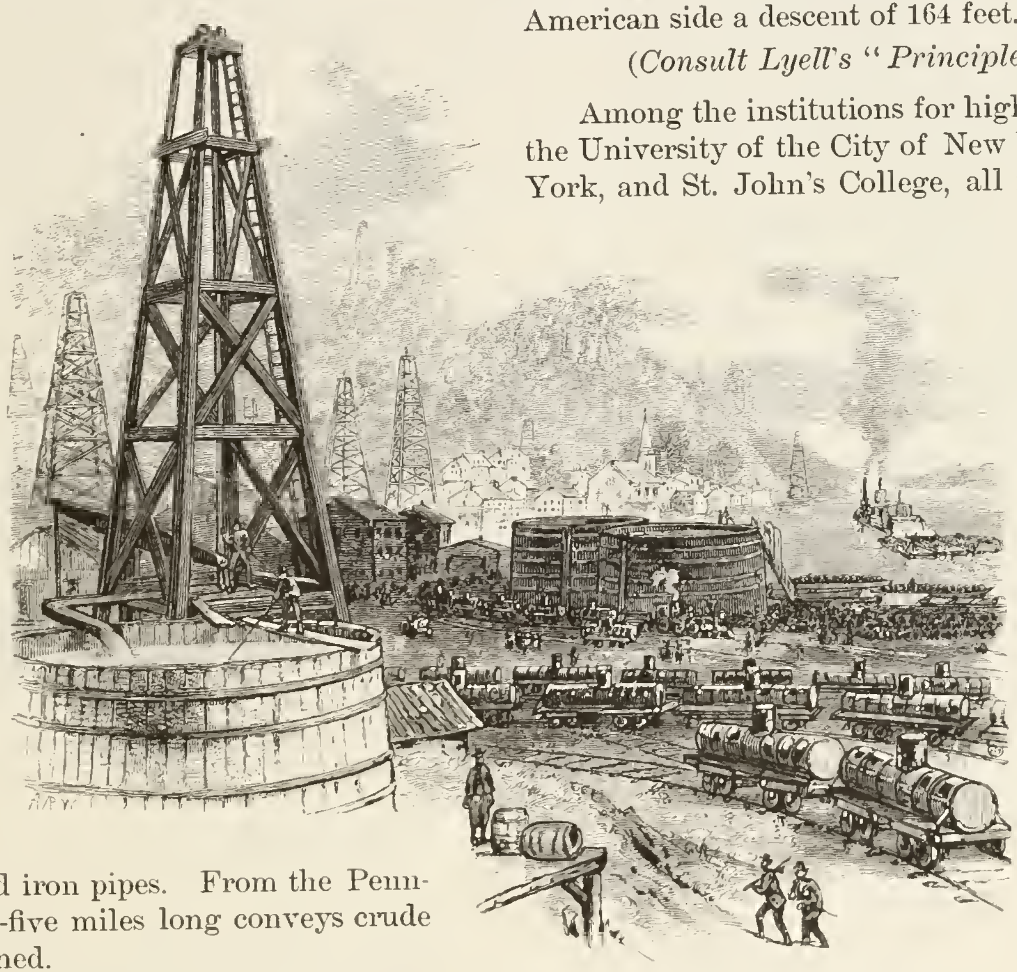
Special crops receive particular attention in certain sections: hops, in parts of central New York; broom-corn, in the Mohawk Valley; garden vegetables, for the supply of the great city markets, on Long Island and in New Jersey; strawberries and peaches, in New Jersey, Maryland, and Delaware; peanuts, in Virginia. Large districts near Norfolk, Virginia, are set apart for the cultivation of early vegetables for northern markets.

Manufacturing is extensively carried on in the Middle Atlantic group, particularly in New York and Pennsylvania, which take the lead of all the other states in the value of their manufactures.

In addition to cotton and woolen goods, among the important manufactures of this section are iron, iron-castings, and machinery, flouring and grist-mill products, clothing, leather, lumber, boots and shoes, and, in Virginia, tobacco.

Minerals.—Iron is found in each of these states; zinc, in New Jersey. Salt is made on an extensive scale in New York (at Syracuse), Virginia, and West Virginia, by evaporating brine obtained from salt-wells. But the great mineral product of this region is coal, which abounds in the Appalachian Highlands, in Pennsylvania, Maryland, West Virginia, and Virginia. The anthracite beds of Pennsylvania are the most extensive in the world. Great quantities of petroleum are also obtained in Pennsylvania and West Virginia.

Petroleum-wells are shown in the engraving. They are bored with the aid of drills and derricks. A steam-pump at work in the well in the foreground is drawing off the oil into an adjacent tank, from which it is carried in pipes to larger tanks conveniently situated for its shipment by boat or rail. It is conveyed to refineries in tank-barges or tank-cars, or through underground iron pipes. From the Pennsylvania oil-regions, a pipe-line sixty-five miles long conveys crude petroleum to Buffalo, where it is refined.


The Oil Industry—Petroleum-Wells.

Mineral springs are numerous in this section. The most noted are those at Saratoga, New York—the White Sulphur Springs, in West Virginia—and many others, within forty miles of the latter, in Virginia.

Commerce.—In commerce, the Middle Atlantic group takes the lead of every other. The great commercial cities, New York, Philadelphia, and Baltimore, ship to foreign markets vast amounts of grain and provisions constantly coming in from the West, and distribute to all parts of the country imports from abroad, as well as domestic products and manufactures. The coasting-trade and lake-traffic of this section are both extensive.

Historical Facts.—West Virginia was set off from Virginia as an independent state in 1863. Virginia and the other members of this group were among the original thirteen states, each having been a colony of Great Britain prior to the Revolution.

Virginia was the oldest colony. The first permanent English settlement within the present limits of the United States was made in 1607, at Jamestown, on the James River, southwest of Williamsburg; find the site of this place on the map.

Consult Bryant's "Popular History of the United States," vol. i., p. 271.

New York and New Jersey were first settled by the Dutch, and still contain many descendants of the original settlers. Maryland was colonized by English Catholics. Delaware was first permanently settled by Swedes, at what is now the city of Wilmington. Pennsylvania was named after William Penn, by whom Philadelphia was founded in 1682. Many Germans and Scotch-Irish afterward emigrated to this colony.

New York, "the Empire State," is the foremost member of the Union in population, wealth, commerce, and various branches of manufacture. It contains about one-tenth of the population of the whole country. More than three-fourths of the inhabitants are native-born; Irish and Germans are most numerous among the foreigners.

The Hudson River, the great natural artery of commerce, is connected by the Erie Canal with Lake Erie at Buffalo, by the Erie and Oswego Canals with Lake Ontario at Oswego, by the Champlain Canal with Lake Champlain at Whitehall, and by the Delaware and Hudson and the Morris Canal with the Delaware River.

New York has several renowned cataracts: Trenton Falls on a branch of the Mohawk, Genesee Falls at Rochester, etc.; but grandest of all, and grandest in the world, are Niagara Falls, having on the American side a descent of 164 feet.

(Consult Lyell's "Principles of Geology," vol. i., p. 354.)

Among the institutions for higher instruction are Columbia College, the University of the City of New York, the College of the City of New York, and St. John's College, all in New York City; Union College, Schenectady; Cornell University, Ithaca; and Vassar College (for women), at Poughkeepsie. The United States Military Academy is situated at West Point.

Albany, largely engaged in domestic trade and manufactures, is the capital.

New York (population, 1,206,299) is the metropolis of America. It is situated mainly on Manhattan Island, at the mouth of the Hudson and on the East River, which connects New York Bay with Long Island Sound. In commercial importance it is surpassed only by London. New York is noted for its noble harbor (*see engraving, p. 40*), its Central Park, covering 862 acres, and its aqueduct, forty miles in length, which supplies it with water from the Croton River.

Manufactures, as well as commerce, contribute much to the prosperity of New York. Thousands of persons are engaged in printing, bookbinding, refining sugar and molasses, baking, brewing, and in making clothing, furniture, boots and shoes, etc.

Brooklyn, the third city of the United States in population (566,663), contains extensive manufactories, spacious warehouses and docks, fine churches, a United States Navy Yard, and Prospect Park, which abounds in picturesque views.

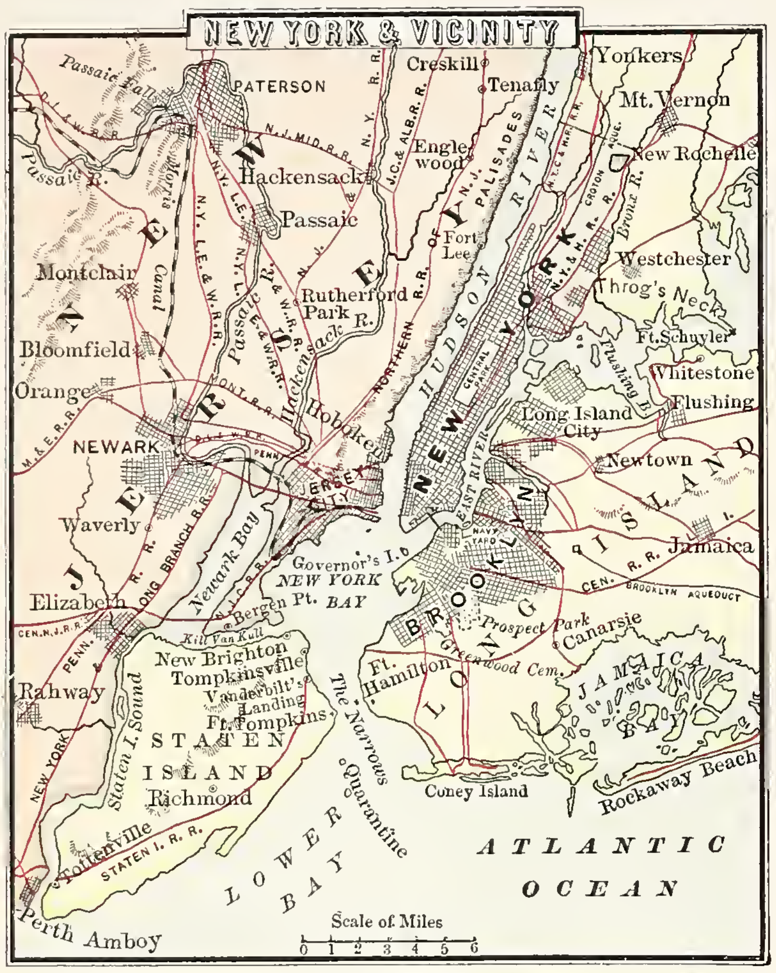
Buffalo, the third city of the state and a leading lake-port, carries on an immense trade in grain, live-stock, and lumber; it is also largely engaged in the transshipment of coal, and in various manufactures, especially of iron.

Rochester, Troy, Syracuse, and Utica, are manufacturing cities, with important railroad and canal connections. Oswego receives great quantities of grain and lumber from Canada and the West, and is specially noted for the manufacture of flour and starch.

Map Questions.—Bound New York. What rivers rise in the Adirondack Mountains? How is Lake George situated? Trace the route of the New York Central Railroad from Buffalo to Albany, by way of Rochester; through what places does it pass? Sailing down the Hudson, what places have you on the right—on the left? What rivers have railroads beside them? What rivers have canals beside them? Why do railroads and canals often follow the course of rivers?

From what river does Rochester derive its water-power? Watertown? Cohoes? What is the largest lake that touches the state? Name some lakes wholly in the state. Describe Chautauqua Lake. To what gulf do its waters ultimately find their way? Through what rivers? How is Ogdensburg, "the Maple City," situated? Rome? Elmira? Yonkers? Lockport, so called from its locks on the Erie Canal? Binghamton? Auburn?

What river is the ultimate outlet of Oneida (*o-ni'dạ*) Lake and the series of lakes southwest of it? For what is the Oswego River valuable? *For its water-power, utilized in mills, which are easily supplied with raw material through the facilities afforded by lake-navigation; hence the thriving city at the mouth of this river. Cities are not located arbitrarily, but where there is some natural advantage.*



(*See map above.*) On what island is Brooklyn? What other city is on Long Island? How is Flushing situated? Jamaica? On what map is the whole of Long Island shown? By what waters is Long Island surrounded? Where is Coney Island? To what state does Staten Island belong? What river bounds New York City on the northeast? What waters surround Manhattan Island? *The Hudson River, the East River, and the Harlem River, which, with a creek running into the Hudson, connects them.*

New Jersey, lying on the route between the metropolis of the New World and the Southern States, is a busy highway of trade and travel. The two great cities near it furnish markets for its garden products and numerous manufactures.

Trenton, the capital, produces more crockery than any other city in America. Newark, the largest city of the state, is noted for various manufactures—jewelry, saddlery, hats, carriages, etc. Jersey City is a great railroad and manufacturing center; a tunnel is in course of construction under the Hudson River, to connect this city with New York. Paterson contains extensive locomotive-works, and, in the production of silk goods, is the foremost city of the Union. Princeton is the seat of the College of New Jersey, and New Brunswick of Rutgers College.

Map Questions.—Bound New Jersey. What cities are opposite New York? What city is opposite Philadelphia? What places in New Jersey are on the Delaware? What is the southern point of New Jersey called? What other noted point is on the Jersey coast? What celebrated watering-places are on the coast?

(*See small map in preceding column.*) What two rivers flow into Newark Bay? What falls are on the Passa'ic River? In what city? What places are on the Pennsylvania Railroad? Where are the Palisades? What are they? *A range of high rocks, rising perpendicularly from the river's edge.*

Pennsylvania, the great mining state, ranks next to New York in population and the value of manufactured articles, and first of all the states in the amount of coal, iron, and petroleum produced. The agricultural and dairy products of this state are of great value. Its domestic commerce is immense; its railroads and canals, its position on Lake Erie, and its connection with the Mississippi River by means of the Ohio, afford unusual facilities for internal trade.

Pennsylvania furnishes about half the iron, and almost all the anthracite coal, used in the country. The anthracite region lies in the east of the state, mainly between the Susquehanna River and the Lehigh. Carbondale, Scranton, Pittston, Wilkesbarre (*wilks'băr-re*), Mauch (*mawk*) Chunk, Pottsville, and Shamo'kin, are its chief mining centers.

The bituminous coal-fields lie mostly on the western slopes of the Alleghanies. The petroleum region is in the northwest of the state, embracing *Oil* Creek and *Oil* City.

Among the most widely known colleges are the University of Pennsylvania, at Philadelphia; Dickinson College, at Carlisle; Lafayette College, at Easton; and the Western University of Pennsylvania, at Pittsburgh.

Harrisburg is the capital of the state. Philadelphia, situated at the junction of the Schuylkill (*skool'kill*) River with the Delaware, is the second city of the Union in population (847,170), the first in area and extent of manufactures. Fairmount Park (2,740 acres), on both banks of the Schuylkill, is the chief ornament of the city. In Independence Hall, still preserved, the Continental Congress adopted the Declaration of Independence.

Pittsburgh is the second city of the state, and Allegheny, opposite Pittsburgh, the third. Pittsburgh has the most extensive iron and glass works in the country, and is a great market for bituminous coal and petroleum. Reading (*red'ing*) contains iron-works and other manufacturing establishments.

Map Questions.—Bound Pennsylvania. What part of the state is mountainous? Describe the Lehigh River. Why is the region between the Susquehanna and the Delaware so closely threaded with railroads? What great river is formed in this state? What rivers form the Ohio? What cities are at their junction? Describe the Alleghany. The Monongahela.

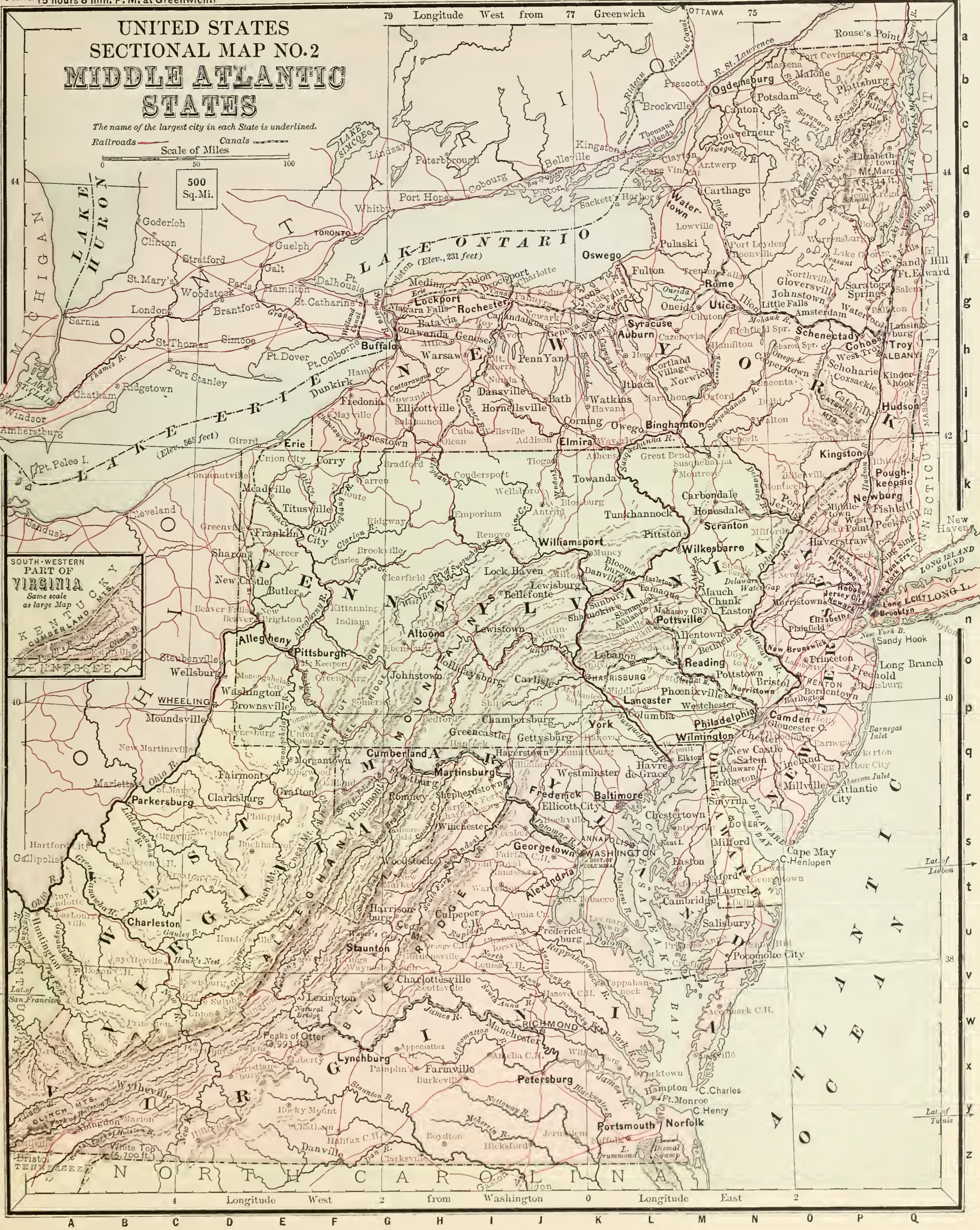
What city is most favorably situated for trading with the Mississippi Valley? What rivers flow into the Susquehanna from the west? What port has Pennsylvania on Lake Erie? What took place on the Susquehanna, opposite Wilkesbarre? *The massacre of Wyo'ming, in the Revolutionary War.* (*Consult Peck's "Wyoming," p. 105.*) Where is Lancaster, the trade-center of a rich farming district? Describe the situation of York. Of Williamsport.

Which extends farther north, Maryland or Delaware? Bound Delaware. What capes are at the entrance of Delaware Bay? Which of these is on the coast of Delaware? What is the capital of Delaware? Its largest city? Bound Maryland. By what mountains is Maryland traversed? By what bay is it indented? Name some places of the Eastern Shore (the part east of Chesapeake Bay). Mention three rivers that enter Chesapeake Bay from Maryland. What places in Maryland are on the Potomac? What is the capital of Maryland? Its largest city? They are both on tributaries of what bay?

Delaware is a fruit-growing state. The soil is for the most part sandy, and the chief agricultural products are peaches and other fruits, Indian corn, and wheat.

Dover, the capital, on Jones Creek, is interested in fruit-canning. Wilmington, the largest city of the state, is extensively engaged in ship-building, and in manufacturing machinery, railroad-cars, morocco, carriages, gunpowder, etc.

TIME (When it is noon at Washington, and 5 hours 8 min. P.M. at Greenwich.) 11-52 A.M. XII 12-8 P.M.



UNITED STATES SECTIONAL MAP NO. 2
MIDDLE ATLANTIC STATES

The name of the largest city in each State is underlined.

Maryland.—The Eastern Shore of Maryland resembles Delaware in its soil and products. Wild ducks abound on the shores of Chesapeake Bay, and fish and oysters in its inlets; the oyster-trade of this bay employs 30,000 persons. The western part of the state contains coal and iron. Corn, wheat, and tobacco, are the staples.

ANNAPOLIS, the capital, on the Severn River near Chesapeake Bay, is the seat of the United States Naval Academy.

Baltimore, on the Patapsco River, fourteen miles from Chesapeake Bay, is a great market for flour, tobacco, and canned fruit and oysters. Being the eastern terminus of the Baltimore and Ohio Railroad (*trace this road to Wheeling, on the map*), and connected by steamships with Liverpool and Brem'en, it receives large quantities of grain and provisions for shipment. Baltimore is the seat of the Johns Hopkins University and Loyo'la College. The city was named in honor of Lord Baltimore, who founded the colony of Maryland. (Population, 332,313.)

Cumberland, the western terminus of the Chesapeake and Ohio Canal, is a shipping-point for coal. Frederick and Hagerstown are trade-centers for productive farming districts.

MAP QUESTIONS.—Bound Virginia. What part of Virginia is level? How does the country slope in the east? What mountains cross the state? What mountains are on the western boundary? Where is White Top, the highest peak in the state? Where is Lake Drummond? What rivers of Virginia flow into Chesapeake Bay?

Describe the Shenandoah. Describe the New River, noted for its fine scenery. The Natural Bridge is southwest of what town? What capes are on the coast? Describe the situation of Petersburg; Alexandria; Lynchburg. What city is opposite Norfolk? Where is Yorktown, the scene of Cornwallis's surrender in the Revolutionary War?—(*Consult Lossing's "Field-Book of the Revolution," vol. ii., p. 307.*)

Bound West Virginia. What is the general slope of the country? Name the principal rivers of West Virginia. What places in West Virginia are on the Ohio? On the Potomac? Why has West Virginia little foreign commerce? What facilities for domestic commerce has it? Where are the White Sulphur Springs?

Virginia contains choice grain-lands in the fertile valley west of the Blue Ridge. The tobacco districts border on the James and the Roanoke River, and their tributaries.

The Natural Bridge, over Cedar Creek, is a rocky mass spanning the bed of the stream at a height of 215 feet.

William and Mary College, at Williamsburg, named after the king and queen of England in whose reign it was founded, is, next to Harvard, the oldest college in the United States. The University of Virginia is at Charlottesville; Washington and Lee University is at Lexington.

RICHMOND, the capital and largest city of Virginia, contains extensive flouring-mills, iron-works, and tobacco-factories. Norfolk, the chief seaport, has an excellent harbor, and ships large quantities of cotton, oysters, and early vegetables.

West Virginia is mountainous and rich in minerals. WHEELING, the capital and chief commercial city, carries on steamboat-building and manufacturing. Parkersburg is the shipping-point for the petroleum district. Charleston is the depot for productive salt, coal, iron, and lumber regions.

Questions.—Compare the Middle Atlantic States with the New England States in regard to size. In regard to climate; soil; agricultural productions; manufactures; mineral wealth; density of population. Name the two largest cities of New England; of the Middle Atlantic States. Where was the first permanent English settlement made in what is now the United States? The first in New England?

What state ranks first in the Union in foreign commerce? What state, second? What state produces the most coal and iron? What city manufactures crockery most extensively? Glass-ware? Silk goods? How and where is petroleum obtained? Salt? Which is the oldest college in the United States? The next oldest? The third in age? In which states of these groups is the capital also the largest city?

How can one go by water from Portland to Albany? In what other way can one go? On what waters can you go from Ogdensburg to Lewiston? From Philadelphia to Richmond? From Philadelphia to Pittsburgh? In going from Washington to New York by railroad, what places will you pass through?

Beginning at the north, name the bays on the coast from Maine to Virginia inclusive. Name the islands. Name the capes. Name each state thus far treated, with its capital, its largest city, and its chief mountains and rivers, if it has any of importance. Draw from memory, as nearly as you can, the outline of each New England State.

DIRECTIONS FOR DRAWING THE MAP.

Draw the horizontal line A B = 362 mi., and the vertical line A O = 385 mi.

Draw the vertical line B C = 210 mi., and the horizontal line C D = 67 mi. Take B L = 25 mi., B M = 100 mi., and A E = 37 mi.

Draw the vertical lines E F = 88 mi., and L T = 130 mi.

Draw the horizontal line F G = 184 mi., and the vertical line G H = 64 mi. Take F I = 28 mi., F K = 47 mi., and L N = 90 mi.

Draw K J = F I. Draw I J, D H, A J, B N, and M N. Take A P = 158 mi., and M Q = 58 mi.

Draw the horizontal line P S = 265 mi. Draw S Q. Take P X = 52 mi., X Y = 76 mi., and S R = 16 mi.

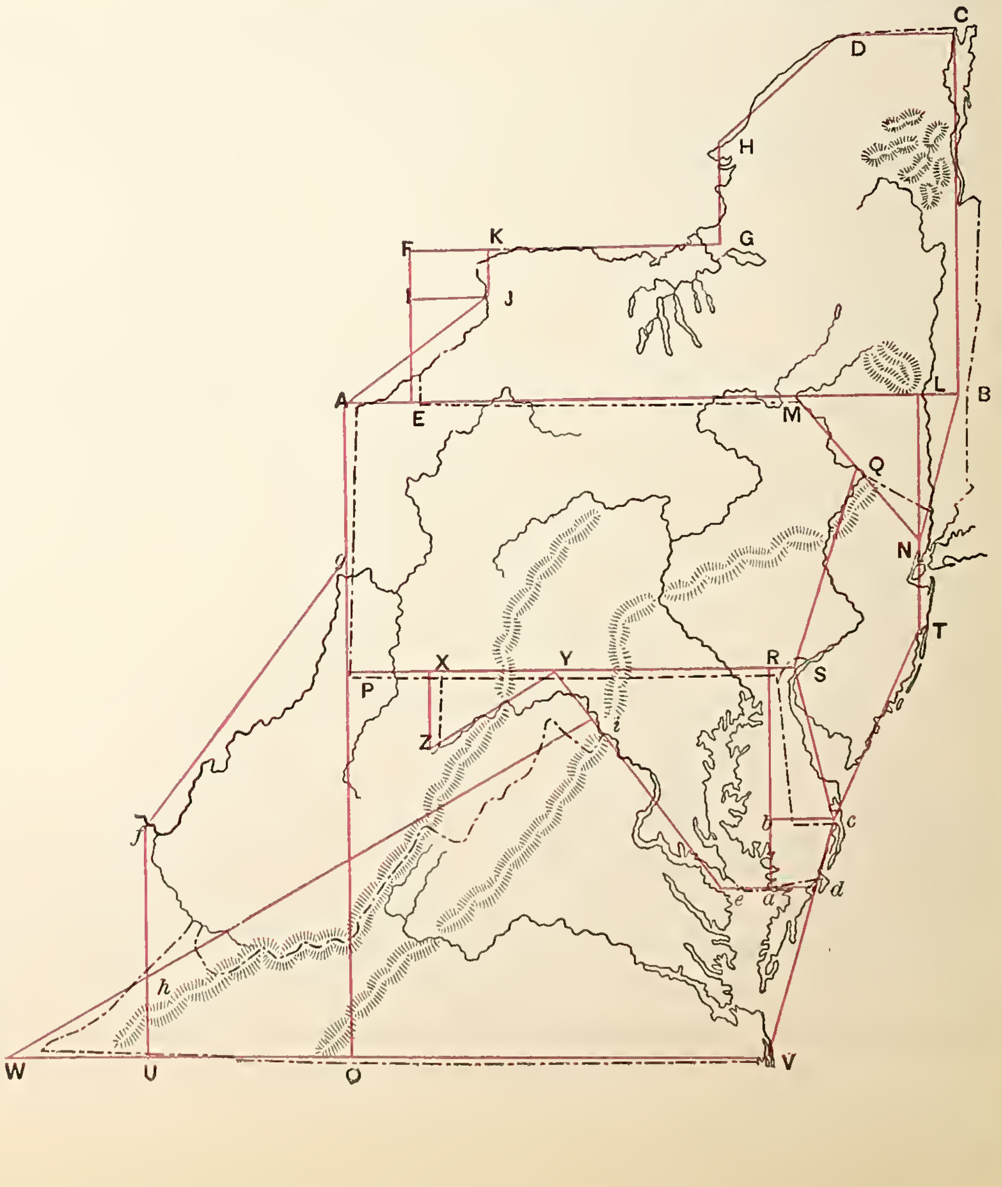
Draw the vertical lines X Z = 38 mi., and R a = 126 mi. Take R b = 88 mi.

Draw the horizontal lines $b\,c$ = 43 mi., $a\,d$ = 32 mi., and $a\,e$ = 20 mi. Draw S c, T c, Y e, and Y Z.

Draw the horizontal lines O V = 252 mi., O U = 115 mi., and the vertical line U f = 135 mi. Take A g = 95 mi., $f\,h$ = 87 mi., and Y i = 32 mi.

Draw V c, $i\,h$, and $f\,g$. Prolong V U and $i\,h$ till they meet at W.

Draw the outline of each state. Complete the Delaware River and the Potomac. Insert the Adirondacks, Catskills, Alleghanies, and Blue Ridge; the Hudson River, Susquehanna, James, Alleghany, Monongahela, and Ohio; the capital and the largest city of each state.



THE SOUTHERN STATES.

The Southern States may be classified, according to their situation, as follows:—

South Atlantic { North Carolina, South Carolina, Georgia, Florida.

Inland { Tennessee, Arkansas.

Gulf { Alabama, Mississippi, Louisiana, Texas.

Indian Territory is treated with the Southern States.

Map Questions.—(*Refer to Physical Map of United States, pp. 34, 35.*) In about what latitude is the northern boundary of North Carolina? The southern point of Florida? To what river on the southwest do the Southern States extend? What states form the northern tier of Southern States?

Is the greater part of the Southern States level or mountainous, low plain or plateau? As regards elevation, what is the character of most of Texas? Of Indian Territory?

How are the very low plains of the Southern States situated? What two states are composed wholly of very low plains? Going back from the Ocean or the Gulf, what do you find with regard to the elevation?

What agricultural region extends from Virginia into the northern part of North Carolina? What region extends along the coast of South Carolina and Georgia? In what region are all the Southern States embraced?

Into which southern state do the Great Plains and the Pasture Region extend? Where is sugar-cane raised? Where does the mustang, or wild horse, roam? The bison?

West of the Mississippi, what is the general slope of the Southern States? What mountains form a watershed east of the Mississippi? In what part of the Southern States are the most minerals found? In which states has gold been obtained? Describe the Arkansas River; the Red. *Refer to maps, pp. 48, 50, for the mountains, rivers, etc., mentioned below.*

Size.—The average size of the Southern States is greater than that of the states of either group already treated; their density of population is less. South Carolina, the smallest Southern State, is nearly the size of Maine, the largest New England State. Texas is much the largest state in the Union. Its area is two hundred times that of Rhode Island, and nearly six times the area of New York.

Surface.—Western Carolina and Eastern Tennessee are traversed by mountain-ranges of the Appalachian System, which extend into the northern part of Georgia and Alabama. From the low plain skirting the Gulf, the surface of Texas rises to a table-land diversified in the west with mountains. But the greater portion of the Southern States, lying in the Atlantic Plain, the Gulf Plain, and the Mississippi Valley, is made up of lowlands.

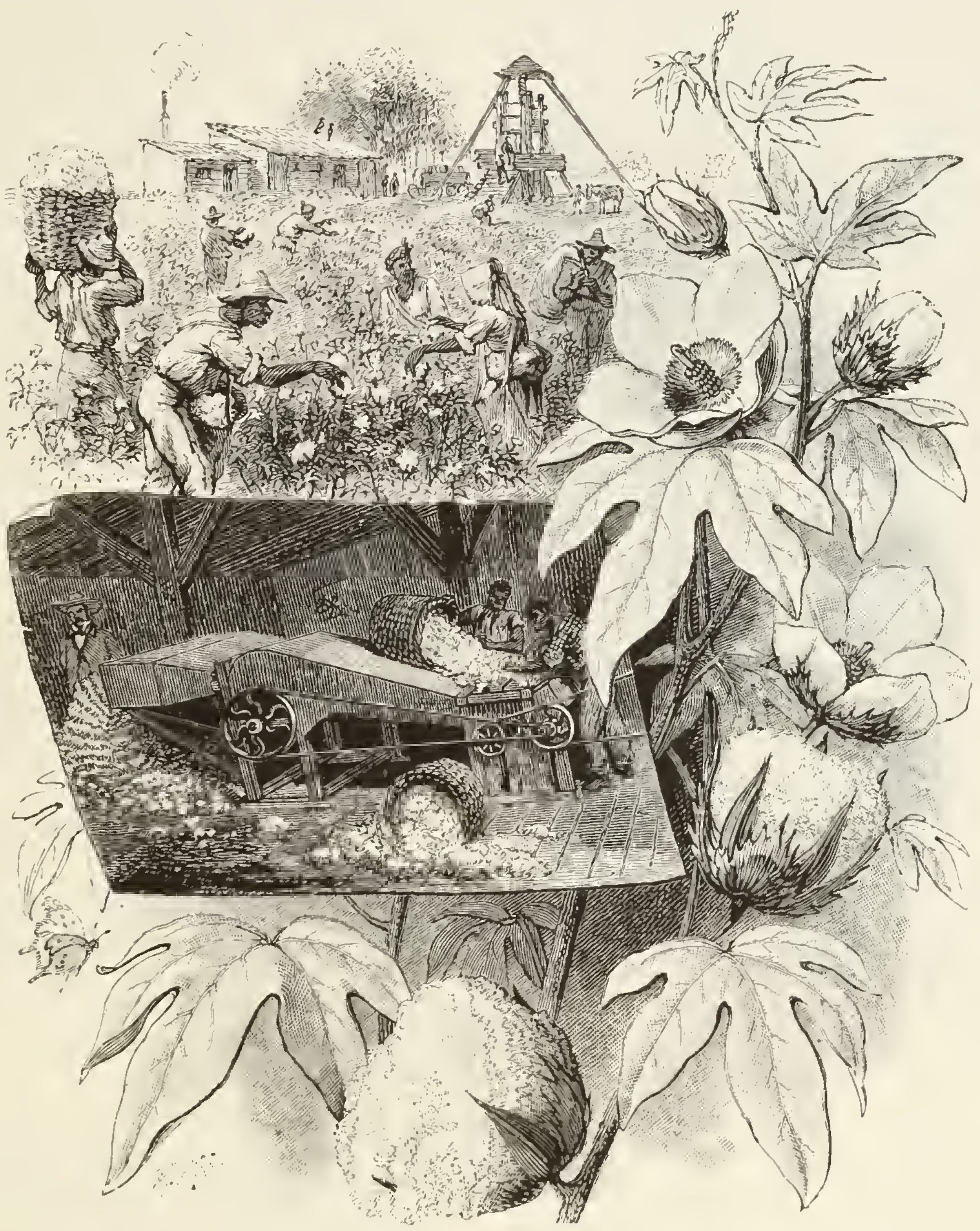
The Black Mountains, in North Carolina, are the loftiest range of the Appalachian System. They are so called from the dark balsam fir-trees which crown their summits. Mount Mitchell, or Black Dome, belonging to this range, is the highest peak east of the Mississippi River (6,707 feet). The loftiest summits in Texas, between the Pecos (*pay'koce*) and the Rio Grande, are less than 6,000 feet in height. The Ozark' Mountains, which extend from Missouri into Arkansas and Indian Territory, have no great elevation, but are rich in minerals.

Swamps abound on the coasts. Part of Dismal Swamp belongs to North Carolina. Okefino'kee Swamp, which covers many miles near the southern boundary of Georgia, is the abode of alligators, rattlesnakes, and moccasins.

The Everglades, in southern Florida, are a vast swamp overgrown with rank grass and thickly dotted with islands bearing tropical trees and vines. The southern coast of Louisiana is lined with salt marsh.

Lakes.—Rivers.—Except in Florida, Louisiana, and northeastern Arkansas, there are few lakes in this section; but rivers are numerous. These are generally navigable to the ridge through which they force their way from the interior uplands; here navigation is obstructed by falls or rapids.

The rivers of the Atlantic Plain belong to the Atlantic System. Those of the Gulf Plain and the Mississippi Valley belong to the Gulf System. Some of the rivers of Mississippi and Louisiana, besides their principal mouths, have sluggish streams, called *bayous* (*bi'ooz*), connecting the main channel with the Gulf.



Cotton—the Plant, the Bloom, the Boll. Picking, Ginning, Pressing.

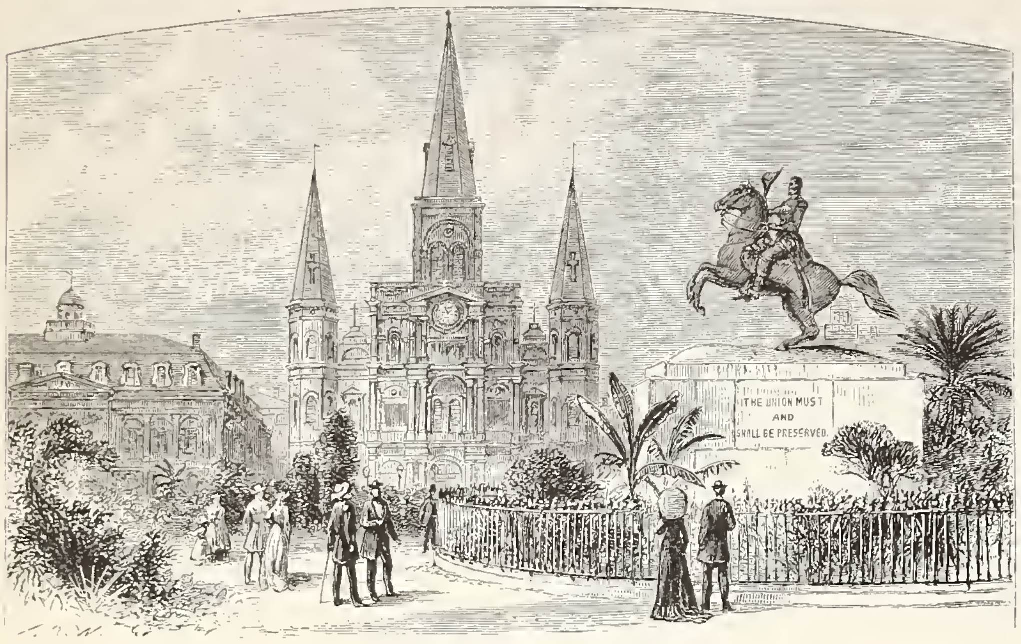
(The cotton-gin separates the seed from the fiber; the cotton-press compresses the fiber, or cotton, in bales.)

Questions.—How may the Southern States be classified, according to their situation? Which state may be classed with either the South Atlantic or the Gulf States? How do the Southern States compare in size with the New England States? With the Middle Atlantic States? How, in density of population? Which is the largest state in the Union?

Describe the surface of the Southern States. What mountains extend into this group? What range of the Appalachian System is the highest? Describe the situation of the Black Mountains. Name their highest peak. What distinguishes Mount Mitchell? Where and how high are the loftiest summits in Texas? Describe the Ozark Mountains.

Where do swamps abound? Name and describe two of these swamps. In which states only of this section are lakes found? Name three lakes of Florida (*see map, p. 48*). Name three lakes of Louisiana (*see map, p. 50*). How far are the rivers generally navigable? Name six rivers of the Atlantic System in the Southern States. Name six of the Gulf System. What are bayous?

The Mississippi River.—The lower course of the Mississippi River belongs to the Southern States. Navigable itself for 2,200 miles, and having not less than a hundred navigable tributaries, this river furnishes a natural outlet for the products of one of the richest valleys in the world. The commerce of which it is the seat has made the city of New Orleans, situated on both its banks, 115 miles from its mouth, the business metropolis of the Southwest.


THE UNION MUST AND SHALL BE PRESERVED

New Orleans: St. Louis Cathedral—Statue of Jackson.

The waters of the lower Mississippi are heavily charged with earthy matter, received mainly from the Missouri. Their deposits have, in the course of years, formed a vast delta, extending along the Gulf for a distance of about 150 miles. The elevation of the delta is so slight that embankments, or *lev'ees*, have to be built along the Mississippi, the Red, and other rivers, to prevent them from overflowing the country during high water. There are 1,500 miles of such embankments in Louisiana. A *crevasse'*, or break in a levee, sometimes does great damage.

Consult Lyell's "Principles of Geology," vol. i., p. 436.

Climate.—Long summers and mild winters distinguish these states. The coasts are generally hot and damp, but in the higher grounds the climate is healthy and delightful. Every winter many invalids from the North seek the balmy air of the Carolinas and Florida.

The heat, which increases as we go south, is modified by winds from the Atlantic and the Gulf. Georgia and the states west of it have an unusually large rainfall, which helps their cotton-crop.

Industrial Pursuits.—Agriculture is the great interest in the Southern States, as we should expect it to be in consequence of their rich soil. Most of the labor on the plantations is performed by colored people, who constitute a large proportion of the population.

Manufacturing industry, for which numerous streams furnish excellent water-power, is increasing, particularly in the Carolinas, Georgia, and Texas. The principal manufactured articles are flouring and grist-mill products and lumber. Cotton goods are made at different points. There are valuable mineral deposits, but they are in a great measure undeveloped.

A large domestic trade is carried on by boat and railroad; and there is considerable foreign commerce, of which New Orleans, Galveston, Mobile, Savannah, Charleston, and Wilmington, are the seats. The exports are cotton, sugar, tobacco, and other products of the country; the imports consist chiefly of manufactures.

Agricultural Products.—These states form the great cotton region, on which the factories of the North, and in a great measure those of England, depend for their supply. Cotton constitutes our most important export. The value of the crop ranks next to that of Indian corn, wheat, and hay.

The long-stapled or sea-island cotton, the best variety known, is produced on the islands and coasts of South Carolina, Georgia, Florida, and Texas. Since the invention of the gin, cotton has become an article of prime importance. All people, except the most savage, use cotton goods to some extent for clothing; and the majority of the human race wear little else.—The seeds of cotton yield oil, and, after this is expressed, are used for fertilizing the soil or fattening stock. The oil is valuable for lubricating machinery, softening wool, dressing morocco, etc.

Other special crops of this section are rice and sugar. South Carolina, Louisiana, and Georgia, produce almost all the rice raised in the country. Southern Louisiana is the chief sugar-cane region.

In South Carolina and Georgia rice is cultivated on lowlands along the coast, which are subject to tidal overflow. In Louisiana lands are chosen that admit of easy irrigation, the planter being allowed to cut, through the levee, openings called flumes, carefully guarded with gates, for the purpose of obtaining water. When the grain is ready for harvesting, the water is drawn off.

North Carolina is the fourth tobacco state of the Union, and Tennessee also produces this staple largely.

Indian corn is the chief grain raised in the Southern States, in all of which it is a staple product. Wheat flourishes in the uplands. Sweet-potatoes are everywhere abundant. Figs, and in the far South oranges, lemons, and bananas, are among the fruits.

Stock-raising is an important branch of industry in parts of this section, particularly in Texas, which takes the lead of all the other states in the number of its cattle. Of the latter, more than five millions range on its fine pastures. In the number of horses Texas ranks next to Illinois, and in the number of sheep next to California.

Texas contains many large stock-farms, or *ranches*, each of which reckons its cattle by thousands. Great numbers of beeves are slaughtered for the purpose both of canning and of salting and barreling their meat. Others are shipped alive from Galveston to the West Indies and northern ports. Others, again, are driven to various railroad points and transported in cars to the large cities of the North. Live-stock and its products—beef, hides, hair, wool, etc.—are among the most valuable exports of the state.

A Texas Ranch: Lassoing Cattle.

Education.—In all these states, provision for free education has been made by law. Most of them contain numerous institutions for the higher instruction of both sexes.

Historical Facts.—North Carolina, South Carolina, and Georgia (the youngest of the British colonies), were among the original thirteen states. They were the scene of stirring events in the Revolutionary War, being at one time the chief battle-ground.

The celebrated retreat of the American generals, Greene and Morgan, before the British general, Cornwallis, was made across the western part of North Carolina. Timely rains, swelling the Catawba River and the Yadkin after the Americans had crossed, and preventing the British from making the passage, twice saved the patriot army from capture. Not till the latter had crossed the Dan into Virginia, securing all the boats for miles, was the pursuit abandoned.—Describe the three rivers just named. What is the Yadkin called in South Carolina?

Tennessee was first settled by emigrants from North Carolina. After forming part of the latter state for some years, it was ceded to the General Government. In 1796 it was admitted as a state.

Alabama and Mississippi were originally settled by the French. The greater part of the territory now embraced in these states passed in 1763 from France to Great Britain, and at the close of the Revolutionary War from Great Britain to the United States. It was at first attached to Georgia.

The earliest settlement in Florida was made by the Spanish at St. Augustine (*aw'gus-teen*), which is the oldest town in the Union. Spain ceded the province to the United States in 1819. Some years later Florida was the seat of the Seminole War, which resulted in the subjection of the Seminoles and the removal of most of the tribe to Indian Territory.

Louisiana and Arkansas were first colonized by the French. They were set off from the vast tract known as Louisiana, bought by the United States from Napoleon in 1803 (*see map, p. 29*).

Texas originally formed part of Mexico. Many having emigrated thither from the United States, and the Mexican Government treating them oppressively, the Texans rose in arms and succeeded in establishing their independence (1836). In 1845 their republic was annexed to the United States.

Indian Territory (*see map, p. 50*) is a large tract originally set apart for Indian tribes removed from their homes east of the Mississippi. The Cherokees, Creeks, Choctaws, Chickasaws, and Seminoles, inhabiting the eastern part of the territory, have become civilized, cultivate farms, and have schools, churches, laws, and governments of their own. The western tribes, still in a wild state, rove about, hunting the bison, antelope, deer, and other game.

A railroad now traverses Indian Territory from Kansas to Texas. Some white men carry on business there as merchants, cattle-traders, lumbermen, etc. Many of the farm-laborers are negroes, formerly slaves. The soil, climate, and productions, are like those of the Southern States. Cotton is cultivated, and coal-mines have been opened. TAHLEQUAH, the capital of the Cherokees, and Ato'ka, in the Choctaw country, are the principal towns.

Questions.—What city is the commercial metropolis of the Southwest? What has made it so? How far is the Mississippi navigable? Give an account of the delta of the Mississippi, and its formation. Describe the climate of the Southern States. What is the leading pursuit?

What is said of manufacturing industry? Of mineral deposits? Of the commerce of the Southern States? What cities are the chief seats of foreign commerce? What constitute the exports, and what the imports? What is the leading agricultural product? State what you can about cotton.

Where mainly is rice produced? Cane-sugar? Tobacco? What is the chief grain? Where does wheat flourish? Which is the principal stock-raising state? Give an account of the ranches of Texas. What is said of education in the Southern States? Mention some historical facts respecting North Carolina, South Carolina, and Georgia. Respecting Tennessee—Alabama and Mississippi—Florida—Louisiana and Arkansas—Texas. Name the original thirteen states. Give an account of Indian Territory.

North Carolina has an extensive coast, lined with long, narrow islands. Shifting sand-bars obstruct the entrance to some of the rivers. Fish abound in the coast-waters; shad and herring are taken in great numbers.

The middle and west of the state are rich in minerals, including gold, coal, and iron. Charlotte, the depot of the gold district, has a United States assay-office, which determines the fineness, weight, and value of the precious metal. Grand scenery is found among the mountains, particularly on the French Broad River.

Turpentine, tar, pitch, and rosin, obtained from the "piney woods," which extend parallel to the coast in a wide belt a few miles inland, are important products of North Carolina.

These products of the pine-forests are in commerce called "naval stores," tar being used on the rigging of vessels, and pitch to cover the seams of the bottom. Crude turpentine oozes out from the pine through an incision made in the trunk. Oil or spirits of turpentine, used in medicine and the arts, is obtained by distilling crude turpentine; what is left, is called rosin. Tar is made by burning pine-wood, full of resinous matter, in a pit, with a slow fire kept smoldering by a covering of turf; the tar gathers in an iron pan previously placed at the bottom of the pit. Pitch is made by boiling down the tar thus obtained.

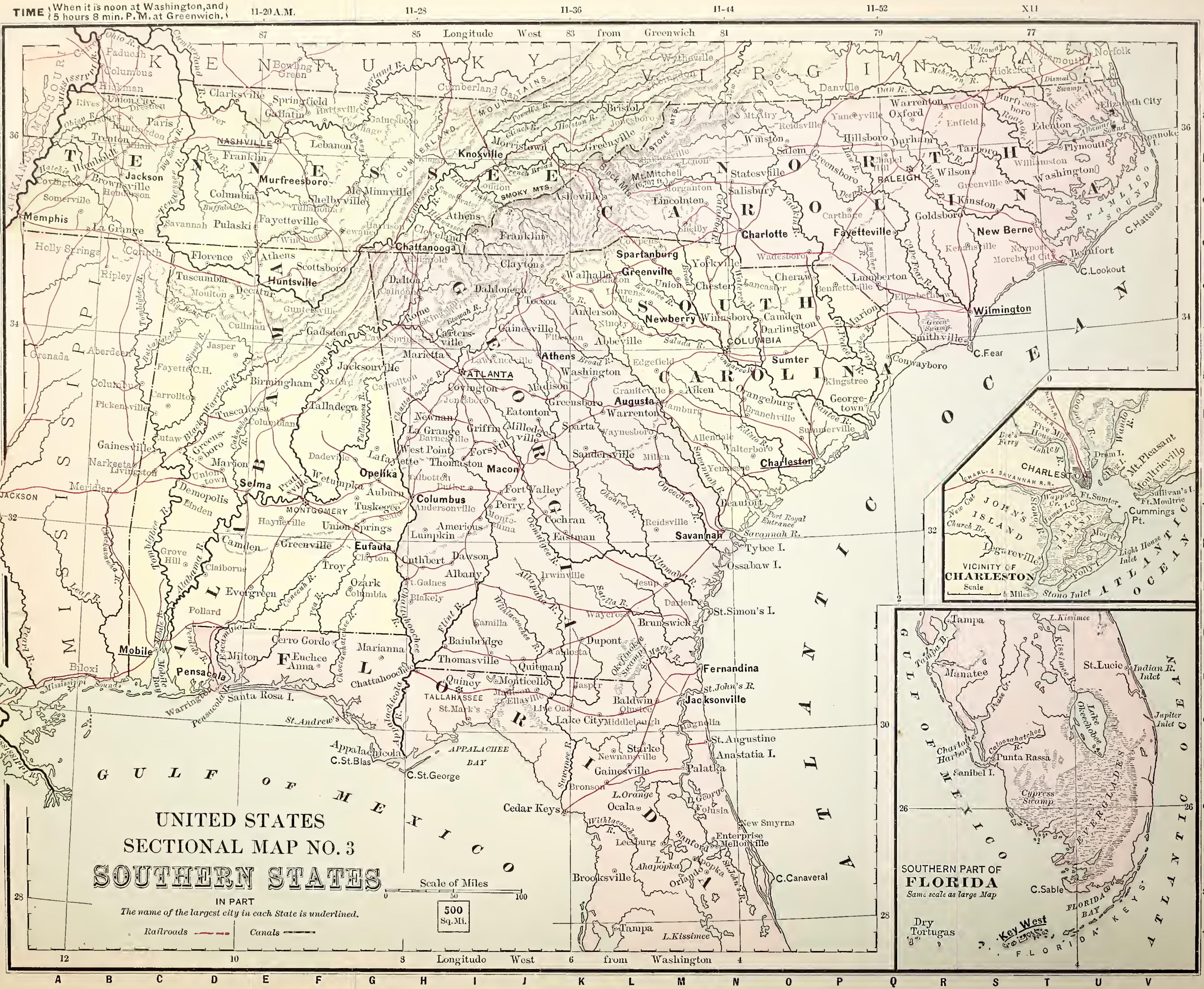
IN THE PINE-WOODS: COLLECTING TURPENTINE—MAKING TAR.

RALEIGH, "the City of Oaks," is the capital. Twenty-eight miles from Raleigh is Chapel Hill, the seat of the University of North Carolina. Wilmington, the chief seaport and largest city, is the greatest market in the world for naval stores. New Berne has a large coast-trade.

South Carolina is noted for its rice, sea-island cotton, and palmettoes. As in North Carolina, the surface is low and flat near the coast, gradually rises toward the middle section, and attains its greatest elevation in the west.

The most important minerals are gold and iron, found in the western part of the state, fine porcelain clay, and phosphate-marls, which are both used at home and exported as fertilizers.

COLUMBIA is the capital of the state and the seat of the South Carolina University. Charleston, the largest city and chief seaport, is the first rice-market in the United States, and ships large quantities of cotton, naval stores, and lumber. Greenville, the third city of the state, is an educational center. Aiken is distinguished for its dry and equable climate, which makes it a favorite winter resort for invalids.



UNITED STATES
SECTIONAL MAP NO. 3
SOUTHERN STATES
IN PART

The name of the largest city in each State is underlined.

Railroads ——— *Canals* ———

Scale of Miles
0 50 100

500 Sq. Mi.

Map Questions.—Bound North Carolina. What mountains are in North Carolina? What capes are on the coast? Into what water do they project? What two sounds indent the coast? Which is farther north? What rivers flow into each? Describe the Cape Fear River. What seaports has North Carolina? What has made Wilmington the largest city in the state?

Bound South Carolina. Name its chief rivers. To what system do they all belong? What two rivers form the Santee? Name the seaports of South Carolina. What city is the chief railroad center of South Carolina? Of North Carolina? (*See small map.*) At the confluence of what two rivers is Charleston situated? What forts protect Charleston?

Georgia is the most populous of the South Atlantic States, and the most extensively engaged in manufactures. Augusta is one of the leading manufacturing centers of the South. Columbus is noted for its cotton and woolen factories.

Gold, coal, iron, statuary marble, etc., are found in the north. The forests in the southeastern part of the state yield yellow pine and live-oak of superior quality for ship-building; also, other timber, and turpentine.

Atlanta, the capital and metropolis of Georgia, owes its rapid growth to its railroad connections, its extensive domestic trade, and its manufacturing enterprise. Savannah, the leading commercial city, is the second cotton-port of the United States. Macon is the depot of a productive cotton district.

Florida has an almost tropical climate. On the banks of the St. John's River, are beautiful orange-groves, producing fruit of the best quality. The magnolia, the live-oak, the palmetto, and the cypress, are among the characteristic trees.

Tallahassee is the capital. Jacksonville, and Pensacola which is a United States naval station, export large quantities of lumber. The Florida Keys are a chain of low coral islands at the extremity of the peninsula. On one of them is Key West, a seat of foreign commerce and the largest city of the state; sponges, green turtles, and cigars manufactured by its residents from Cuban tobacco, are among its exports.

Map Questions.—Bound Georgia. What river is on the boundary between Georgia and South Carolina? Between Georgia and Florida? Between Georgia and Alabama? Describe the Chattahoochee River; the Flint; the Altamaha (*awl-ta-ma-haw'*). Where is Okefino'kee Swamp?

Name the seaports of Georgia. In what two ways can one go from Savannah to Charleston? Describe the situation of Milledgeville, formerly the capital. Of Athens, the seat of the University of Georgia. What has made Augusta and Columbus manufacturing cities? *Their excellent water-power.*

Bound Florida. In what part of Florida are most of the towns? Why is this? Between what states is the Perdido (*per-de'do*) River? Describe the St. John's River. What rivers form the Appalachicola? Name the chief ports of Florida on the Atlantic; on the Gulf. With what places is Jacksonville connected by railroad? Describe the situation of Fernandina (*fer-nan-de'na*). Of Lake Okeecho'bee. Of Cape Sable.

Alabama.—In the south of this state are extensive pine-forests, yielding timber and turpentine; in the north are excellent grazing-lands. Between are mountain-ridges, extending southwest from northern Georgia, and, in central Alabama, the agricultural region, devoted principally to cotton and corn.

The mountainous district is rich in coal, iron, granite, marble, and other minerals.

Montgomery, the capital, Selma, and Eufaula, are business centers and shipping-points for cotton. Mobile (*mo-beel'*), the largest city and a leading Gulf-port, has an active export trade in cotton, lumber, and naval stores; coffee is the chief import.

Map Questions.—Bound Alabama. What three river-valleys compose the greater part of the state? Describe the Tennessee River. What rivers form the Mobile? Describe the Tombigbee. Name its chief branch. Describe the Alabama River. Which is the largest place in the north of the state? Describe the situation of Huntsville. Of Tuscaloosa, the seat of the University of Alabama. What city is the chief railroad center of Alabama? Where is Opeli'ka?

Bound Tennessee. What river finally receives the waters of all the streams of Tennessee? Name the two chief rivers of Tennessee. The principal mountains. Describe the Cumberland River. How is Murfreesboro situated? Jackson? From what states does the Mississippi River separate Tennessee? When it is noon at Washington, what is the time at Nashville?

Tennessee is one of the leading manufacturing states of the South.

East Tennessee is mountainous, and abounds in minerals—coal, iron, copper, and beautiful varieties of marble. Knoxville is the trade-center for the northern part of this section; Chattanooga, for the southern. The former city is the seat of the East Tennessee University and the State Agricultural College.

Middle Tennessee is hilly, and is a fine agricultural and stock-raising region. Nashville, the capital and largest city of the state, and the seat of Vanderbilt University, belongs to this section.

In West Tennessee, which is low, the raising of cotton and tobacco is the leading interest. Memphis, the second city of the state in population, is the shipping-point for cotton designed for the New Orleans market; part of the crop is sent by railroad to Norfolk.

Questions.—State what you know about North Carolina, its minerals, pine-products, and cities. Give an account of the surface, products, minerals, and important places, of South Carolina. Of Georgia. Describe Florida in like manner. What are the Florida Keys? What city is on one of them? What does Key West export? Describe the different sections of Alabama, and its chief cities. As regards manufactures, how does Tennessee rank? How is Tennessee naturally divided? Describe East Tennessee, and name its chief cities. Of what is Knoxville the seat? Describe Middle Tennessee, and name its chief city. West Tennessee.

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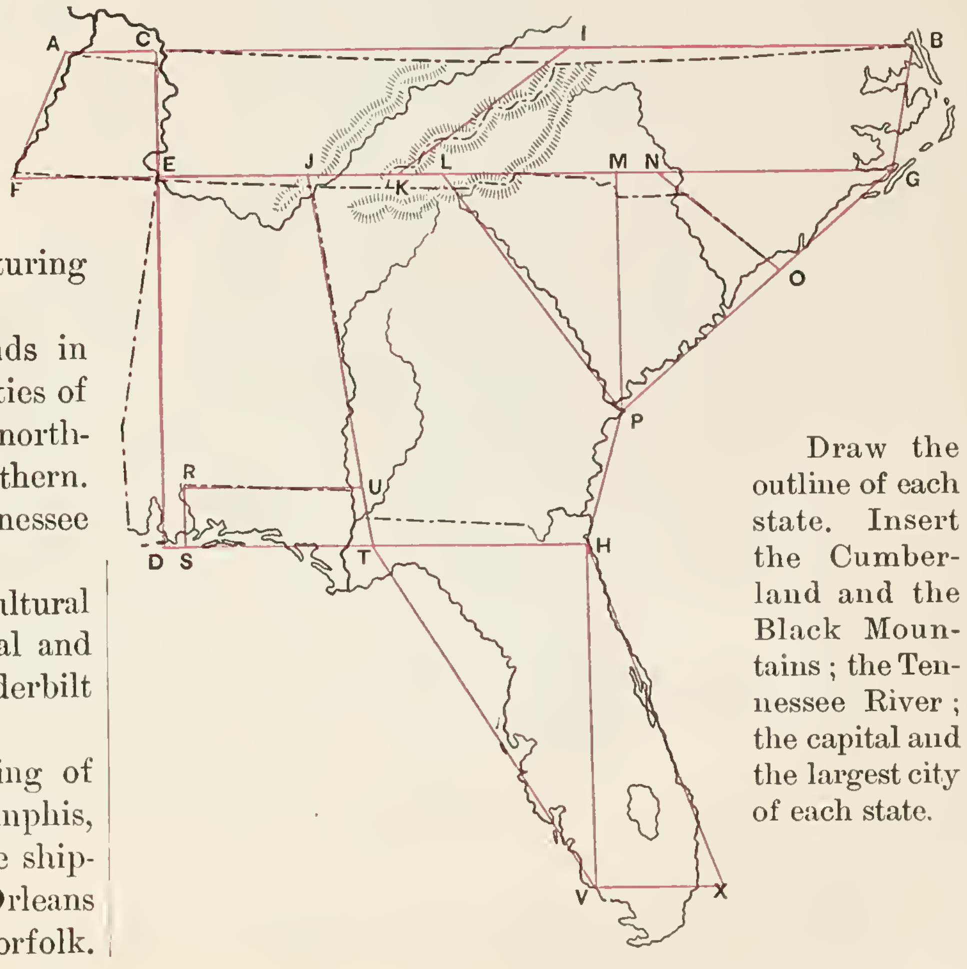
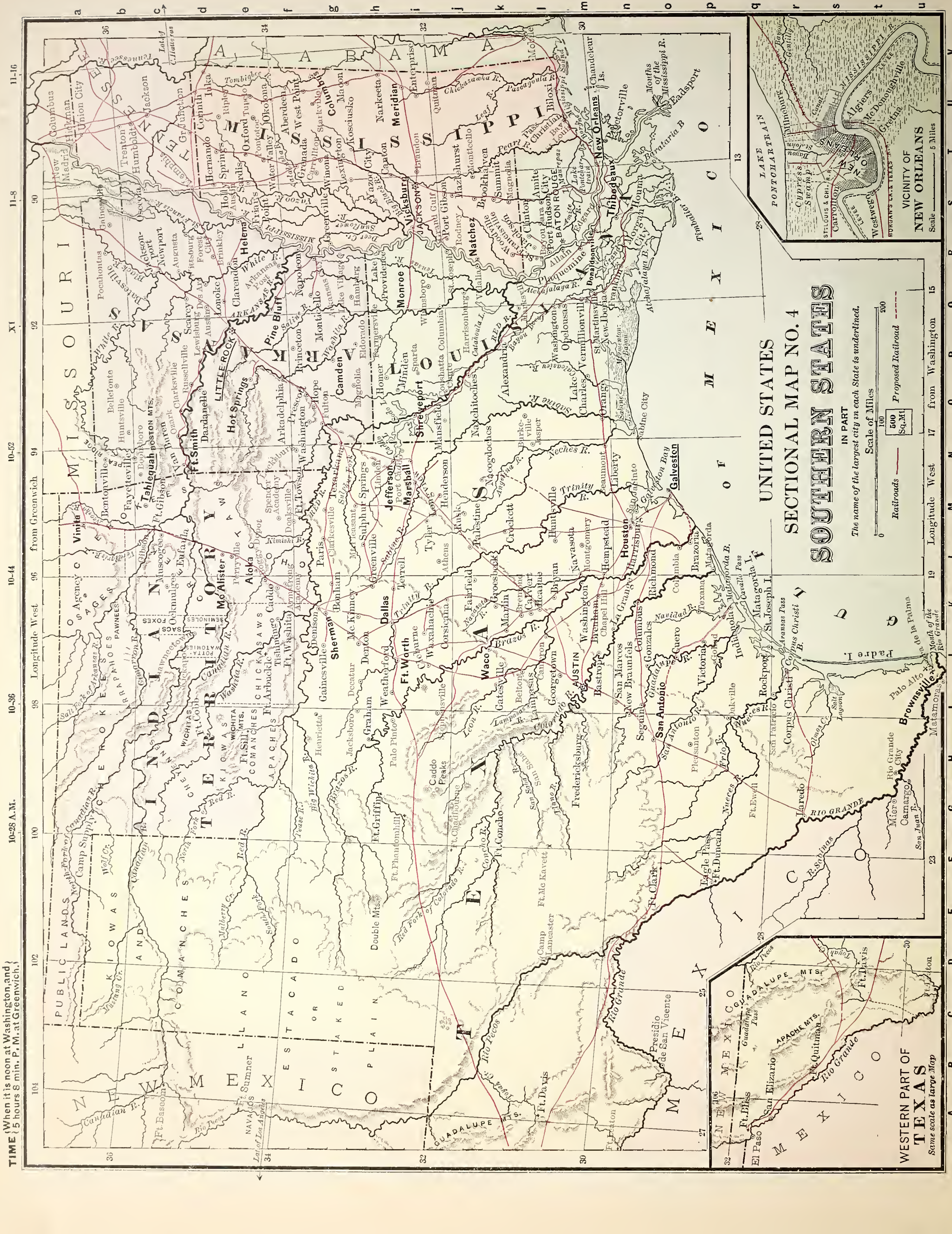
DIRECTIONS FOR DRAWING THE MAP.

Draw the horizontal line A B = 770 mi. Take A C = 75 mi.
Draw the vertical line C D = 445 mi. Take C E = 110 mi.
Draw the horizontal lines E F = 125 mi., and E G = 670 mi.
Take B I = 305 mi., and G K = 454 mi.
Draw A F, I K, and B G.
Take E J = 140 mi., J L = 125 mi., L N = 205 mi., and L M = 155 mi.
Draw the vertical line M P = 215 mi.
Draw the horizontal line D H = 390 mi.
Draw H P, P G, and P L. Take P O = 195 mi., and draw O N.
Take D S = 15 mi., and D T = 192 mi.
Draw the vertical lines S R = 50 mi., and H V = 320 mi.
Draw the horizontal line V X = 110 mi.
Draw J T, T V, and H X, and the horizontal line R U.



Draw the outline of each state. Insert the Cumberland and the Black Mountains; the Tennessee River; the capital and the largest city of each state.



UNITED STATES
SECTIONAL MAP NO. 4
SOUTHERN STATES
IN PART

The name of the largest city in each State is underlined.

Mississippi has no mountains, no minerals of value, no very large city. Its wealth lies in its rich soil and agricultural products. Cotton and corn are the staples. Lumber is the chief article manufactured.

The river-trade is extensive, consisting principally in the transportation of cotton and planters' supplies. Vicksburg, the largest city, is the principal shipping-point in the west of the state, and Columbus in the east. Steamboats connect Columbus with Mobile.

Jackson is the capital. Natchez is the seat of an active river-trade. Most of the foreign commerce is carried on through New Orleans and Mobile.

Map Questions.—Bound Mississippi. What part of the state is highest? What river touches the northeast corner? What rivers separate Mississippi from Louisiana? Describe the Yazoo' River. In what two ways can one go from Vicksburg to New Orleans? By which route is cotton usually forwarded?

To what port is the cotton of eastern Mississippi mostly sent? How does it reach Mobile from Columbus? How, from Meridian? Where is Oxford, the seat of the University of Mississippi? What city of Tennessee is the trade-center for northwestern Mississippi?

Bound Louisiana. What bays are on the coast? What lakes are on the western boundary? What lake is near New Orleans? What river crosses Louisiana? How is Donaldsonville situated? Thibodeaux (*tib-o-do'*)? Describe the Washita (*wosh'-e-taw*) River. What city is on the Washita? Why is New Orleans (*see small map*) called "the Crescent City"?

Louisiana is an agricultural and commercial state. The staple products for export are sugar, cotton, and rice. The making of sugar and molasses from sugar-cane is the chief manufacturing interest. Situated at the gate of the Mississippi Valley, to which New Orleans holds the key, Louisiana, in the value of its exports, is surpassed only by New York. Rock-salt is the principal mineral.

A large part of the people are Roman Catholics, of French descent, and still to some extent speaking the French language. The state is divided into Parishes instead of Counties.—Baton Rouge (*bat'un roozh*) is the capital. New Orleans, the metropolis of the state, is the third commercial city of the Union, the first cotton and sugar market. Shreveport is the principal shipping-point on the Red River for cotton.

Texas is a state of immense agricultural and mineral resources. Its "bottom-lands," skirting the rivers, are unsurpassed in fertility. The best of timber, and various useful minerals—coal, iron, salt, etc.—abound.

Immigrants are settling in the state in great numbers. The coast-trade is large; and commerce is carried on with Mexico, the West Indies, and European cities, through Galveston, the principal seaport.

Austin, the capital, and Houston (*hew'stun*), a railroad and manufacturing center, are named after men distinguished in the early history of Texas.

In Texas we occasionally meet with Spanish names which retain their Spanish pronunciation; for example, Rio Grande (meaning *great river*), *re'o grahn'day*—Rio Pecos, *re'o pay'koce*. The names of some of the older settlements commence with *San*, the Spanish word for *saint*. At San Jacinto, near the coast, was fought the great battle between the Texans and the Mexicans which secured to the former their independence.—(*Consult Baker's "Texas Scrap Book,"* p. 95.)

Map Questions.—Bound Texas. In what direction is the general slope? In what part of Texas are most of the towns and railroads? Why? What place is the chief railroad center in the north? Where is the dry and sterile Llano Estacado (*lyah'no es-tah-kah'do*)? What do these words mean?

Name the four largest rivers of Texas. Describe the Brazos (*brah'zoce*) River. The Colorado. How is San Antonio situated? Dallas? Sherman? Jefferson? Marshall? What bays are on the coast? What towns? What city is on the Mexican frontier?

Bound Indian Territory. Mention its principal rivers. Its principal towns. What part of the territory is traversed by a railroad? In what part do the Cherokees live?

Arkansas, where it borders on the Mississippi, is low and in parts swampy. Cotton and corn are the staples. There is an abundance of valuable minerals—zinc, silver-bearing lead-ores, copper, iron, coal, and superior oil-stone, used for hones.

Little Rock, the capital and largest city, stands on a cliff of no great height, from which it takes its name. Large steamboats ascend the Arkansas River to this point; small ones can go on to Fort Smith. Hot Springs is so called from its medicinal springs of high temperature.

Map Questions.—Bound Arkansas. What rivers form parts of its boundaries? What mountains are in the northwest? In what part of the state are lakes? Mention the three chief rivers of Arkansas. Describe the White River. The St. Francis. Name the chief places on the Arkansas River. What place is partly in Texas and partly in Arkansas? What is the chief port of Arkansas on the Mississippi? On the Washita?

Questions.—Give an account of Mississippi and its principal cities. Of Louisiana, its commercial metropolis, and French element. Of Texas. What is said of the proper names of Texas? For what is San Jacinto noted? Give an account of Arkansas. Of the Southern States, which takes the lead in commerce? In manufactures? In stock-raising? How does the cotton of Tennessee reach a market? Of Arkansas? Of Mississippi? On what waters can you sail from Brownsville to Little Rock? In sailing from Memphis to New Orleans, what places would you pass on the left bank? On the right bank?

◆

DIRECTIONS FOR DRAWING THE MAP.

Draw the vertical line A B = 520 miles.

Take A E = 40 mi., E I = 210 mi., I F = 35 mi., F G = 135 mi.

Draw the horizontal lines E H = 250 mi., F J = 168 mi., G Q = 268 mi.

Take G R = 32 mi., and R N = 115 mi. Draw H J, J N.

Take H K = 100 mi.

Draw the horizontal line K L = 120 mi.

Draw the vertical lines R S = 90 mi., Q P = 150 mi., L M = 315 mi.

Draw the horizontal lines M O, A C = 510 mi., B D = 610 mi.

Draw B S, S P.

Take A d = 36 mi., A V = 338 mi., B T = 200 mi., T Z = 232 mi.

Draw the vertical lines V W = 175 mi., C X = 335 mi., T U = 275 mi.

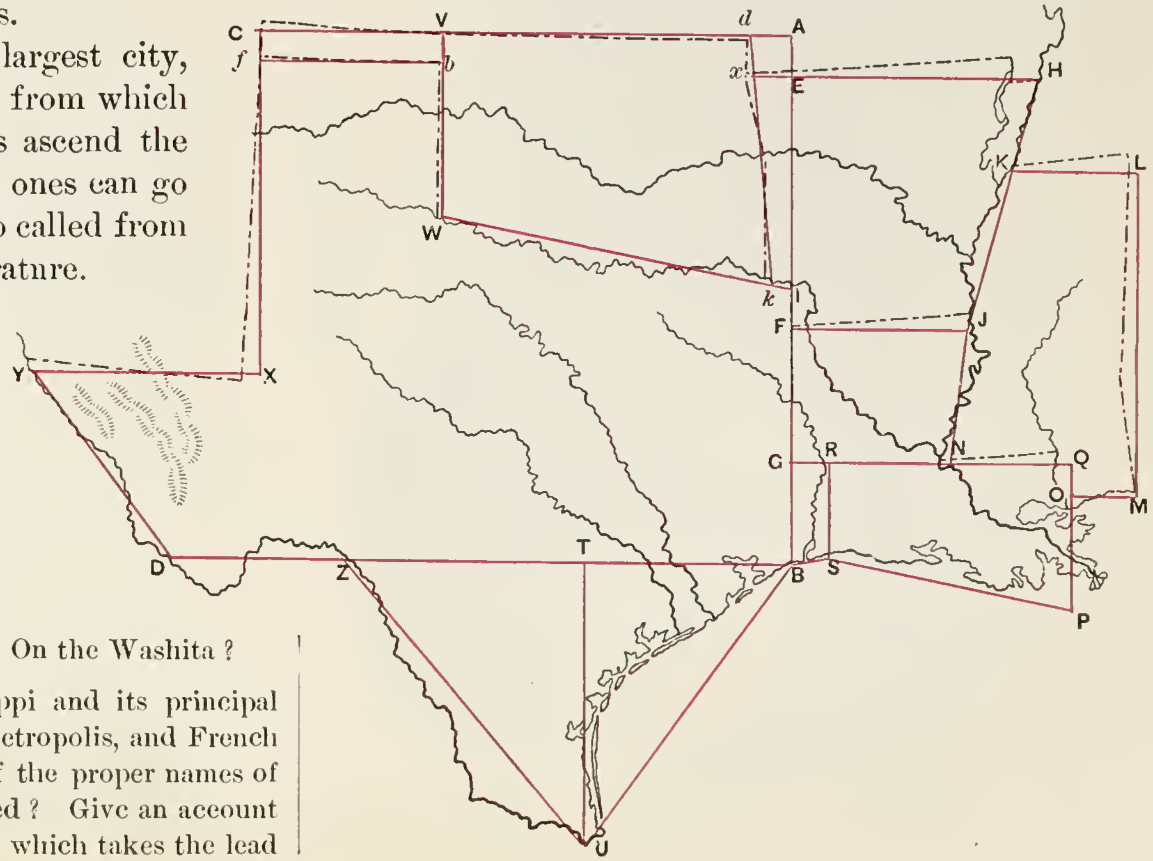
Take V b = 30 mi.

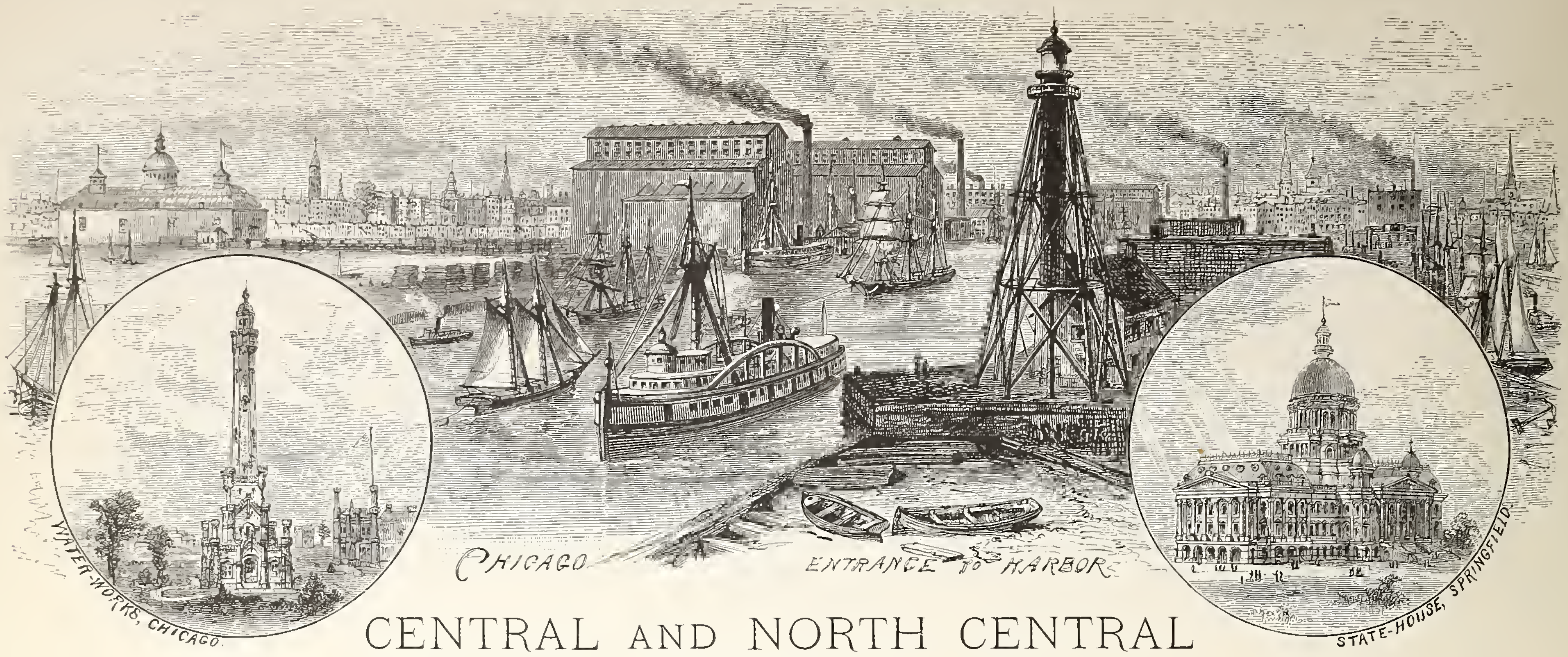
Draw the horizontal lines X Y = 225 mi., and bf.

Draw B U, U Z, W I. Take I k = 18 mi.

Draw dk, Y D, and the horizontal line E x.

Draw the outline of each state. Insert the principal rivers; also, the capital and the largest city of each state.




WATER-WORKS, CHICAGO.
CHICAGO
ENTRANCE TO HARBOR
STATE-HOUSE, SPRINGFIELD.

CENTRAL AND NORTH CENTRAL STATES.

DESCRIPTION OF THE GROUPS.

Situation.—Kansas is midway between the northern and the southern boundary of the United States, and midway between the Atlantic and the Pacific coast. Missouri and Kentucky, lying in the same latitude as Kansas, may be classed with the latter, the three forming the group of Central States.

North of the Central States, and situated mostly in the Mississippi Valley, are the eight North Central States. Name them.

Two sectional maps are required to show the Central and the North Central States. Instead of representing each group by itself, we display the states to better advantage by showing Kentucky with the five North Central States east of the Mississippi River (*see map, p. 55*); and Missouri and Kansas with the three North Central States west of the Mississippi (*see map, p. 57*). The Territory of Dako'ta, which resembles the North Central States in its surface and productions, is shown on the latter map.

(*Refer to maps, pp. 55, 57.*) What river separates the eastern section of the Central and the North Central States from the western? Are these two maps on the same scale? Which is on the larger scale? Name the three Central States in the order of their size.

Which is the largest of the North Central States? Which is the smallest? Which border on the Ohio River? Which border on the Mississippi? Which border on Lake Michigan? On Lake Erie? On Lake Superior? Which do not border on the Great Lakes? Through what waters does the international boundary between the Dominion of Canada and the North Central States pass?

Size.—Minnesota, the largest state of these two groups, has a greater area than New York and Maine together. Indiana, the smallest, is more than four times as large as Massachusetts.

General Description.—Parts of Kentucky and Missouri are traversed by low mountain-ranges; but Kansas and the North Central States are for the most part made up of prairies, either level or gently rolling. They consist partly of lowlands, and partly of table-land of moderate height. The prairie-lands are unsurpassed in fertility; they are generally destitute of timber, except on the banks of the streams by which they are intersected.

The climate is healthy and delightful—warm in the Central States—cold, but remarkably dry, in Minnesota; between these extremes it varies according to the latitude.

This section has grown very rapidly in population, its natural advantages having attracted settlers in great numbers from the older states and from different countries of Europe.

The General Government offers special inducements for settling on its "public lands". A tract of 160 acres may be obtained without the payment of money other than slight commissions and fees, under either the Homestead or the Timber-Culture Act. A patent is issued under the former, on proof of five years' continuous residence on, and cultivation of, the tract entered; under the latter, title is given eight years after the date of entry, on proof that the person who entered the land has planted a certain portion of it (in the case of forty-acre tracts or more, one-sixteenth) with forest-trees, and has growing at the time at least 675 thrifty trees to each acre so planted. Under the Preëmption Act, a person entering his claim at a land-office secures the right of taking 160 acres at the low government rate, on proof of residence and cultivation for at least six months. To avail himself of these provisions, a foreigner must declare his intention to become a citizen.

Lakes abound in Michigan, Wisconsin, and Minnesota. These states also, as well as Ohio, Indiana, and Illinois, have the advantage of being situated on one or more of the Great Lakes. Lake Superior is the most elevated of the Great Lakes, Superior and Huron are the deepest. Lake Erie has the least depth. All three are subject to violent storms.

Rivers.—Numerous navigable streams furnish highways for internal trade; the most important belong to the Gulf system.

The Mississippi is navigable to the Falls of St. Anthony in Minnesota, where the descent in the river furnishes the city of Minneapolis unsurpassed water-power. Steamboats ascend the Missouri as far as the Great Falls, a distance of 2,700 miles. The Ohio is navigable throughout its length (nearly 1,000 miles), except at Louisville, where a canal has been built around the rapids.

The rivers of the St. Lawrence system, for the most part short and rapid, are valuable chiefly for their water-power.

Map Questions.—(*Refer to Physical Map of United States, pp. 34, 35.*) Do the Central and the North Central States consist mainly of low plains or plateaus? Which state consists almost entirely of low plains? What part of Kentucky is a low plain? What part of Missouri is mountainous? Which of the Central States is wholly table-land? Which of the North Central States? Through what states, and what part of them, does the watershed extend, which separates the basin of the Mississippi from that of the St. Lawrence?

What part of the North Central States is embraced in the Lumber Region? In the Wheat Region? Which of the Central States also produce wheat largely? *Kansas and Missouri.* What states are included in the Corn Region? In what other states is corn a staple product? What animals are extensively raised throughout the Corn Region?

In what part of this section is the Hemp and Tobacco Region? Which states are noted for the culture of the grape-vine? Over which states of these groups do the Great Plains extend? Describe Dakota, as regards elevation. In what part of this section is gold obtained? Copper? Lead? Zinc? Petroleum? What wild animals are found on the Great Plains?

Industrial Pursuits.—Nature having given these states a rich soil, advantages for commercial intercourse, ample water-power, mineral wealth, and in the north the best of timber, their inhabitants are extensively engaged in farming, trade, manufacturing, mining, and lumbering.

Grain-raising is the leading industry. The northern half of this section belongs to the wheat-belt of the United States (continued to the north in Canada), while the southern half is embraced in the Corn Region. The wheat-farms are on an immense scale. Part of the crop is manufactured into flour in Western mills; the rest is transported to Eastern cities, where it is ground or shipped to Europe. Corn is raised in larger quantities than wheat, but most of the crop is used at home in feeding live-stock.

Other grains constitute important crops—barley in Wisconsin, rye and oats in Illinois, and oats in Iowa. These states, as also Michigan and Ohio, yield large potato crops. Wisconsin is noted for its hops, and Michigan for fruits. Kentucky produces more hemp and tobacco than any other state, and Missouri also raises large quantities of both.

The principal flax and sorghum regions are embraced within the limits of these groups. Sorghum resembles corn when growing, and yields a sirup like the molasses obtained from sugar-cane.

The many railroads with which these states are threaded, are largely engaged in the transportation of agricultural products, flour, lumber, provisions, etc. The imports are chiefly manufactured articles. While Ohio ranks as the fourth manufacturing state of the Union, Missouri as the fifth, and Illinois as the sixth, in the younger states manufactures are comparatively limited.

Minerals.—Three grand divisions of the coal-measures of the United States (yielding bituminous coal) lie in these two groups. These are the Michigan field, the fields of Illinois, Indiana, and Kentucky, and the measures of the Missouri basin, extending from Iowa and Nebraska to Arkansas and Indian Territory.

Of iron there is an exhaustless supply. It is mined in various quarters, particularly in Ohio, Michigan, and Missouri. Near Lake Superior are the richest copper-mines known; and the lead deposits on the Mississippi (where Wisconsin, Illinois, and Iowa join), and in southwestern Missouri, help to make the United States the third lead-producing country of the world.

Historical Facts.—Kentucky was first settled by emigrants from North Carolina and Virginia; it was originally included in the latter state. A constant warfare was waged with the Indians by its early pioneers. The North Central States east of the Mississippi were laid off from the lands acquired from Great Britain at the close of the Revolutionary War and organized as the Territory Northwest of the Ohio (*map, p. 29*). Missouri, Kansas, and the North Central States west of the Mississippi, were formed from the Louisiana Purchase. Minnesota, lying on both sides of the Mississippi, is made up of parts taken from both these tracts.

Education.—Liberal provision for free education is made in all these states. The public schools are of acknowledged excellence, and there are numerous institutions for higher instruction.

Questions.—What three states are called Central States, and why? How are the eight North Central States situated? Give an idea of the comparative size of these states. Describe the surface of Kentucky and Missouri. Of Kansas and the North Central States. Give an account of the climate. Of the growth in population. What inducements has the Government offered to immigrants?

Where do lakes abound? What states border on the Great Lakes? What is said of Lakes Superior, Huron, and Erie? To what system do the most important rivers belong? How far is the Mississippi navigable? The Missouri? The Ohio? Describe the rivers of the St. Lawrence system. What natural advantages have these states, and what are the chief industrial pursuits? What is the leading industry? What are the two principal grains? What becomes of the crop? What other grains are raised?

Where are hops largely produced? Fruits? Hemp and tobacco? Name two other important products. What is made from sorghum? In what does the commerce of this section largely consist? Describe these states as regards manufacturing industry. Give an account of the coal-fields in these two groups. What other minerals are found? By whom was Kentucky first settled? From what were the North Central States east of the Mississippi laid off? The North Central States west of the Mississippi? How was Minnesota formed? What educational advantages have these states?

DESCRIPTION OF THE STATES.

Kentucky is the oldest state west of the Appalachian Mountains. Its thorough-bred horses, mules, and cattle, are famous. The "blue-grass region," traversed by the Licking and Kentucky Rivers, affords the best of pasturage, and produces heavy crops of hemp and tobacco. Kentucky is remarkable for its vast caverns, hollowed out by underground streams in their limestone beds. The most wonderful of these is Mammoth Cave.

FRANKFORT is the capital. Louisville, "the Falls City," is the metropolis; it is the largest tobacco-market in the world, an important center of railroad and river trade, and a busy manufacturing and pork-packing city. Covington and Newport, opposite to Cincinnati, with which they are connected by bridges, manufacture cotton, hemp, etc., and have extensive iron and steel works. Lexington, named in commemoration of the battle of Lexington, which was fought a month before the city was founded, is the seat of the Kentucky University.

Ohio is the third state of the Union in population, the second in the production of coal. In manufactures, it is the leading state west of the Appalachian Mountains. Among its special agricultural products are flax and grapes; the latter are cultivated with great success, for the manufacture of wine, along the shores of Lake Erie and in the south of the state.

Ohio is the seat of an immense domestic commerce. The great trunk lines of railroad from the West cross the state, and connected with them is a thick network of branch roads. Two systems of canals join Lake Erie with the Ohio River.

COLUMBUS, noted for its spacious State-house and other fine public buildings, is the capital. The metropolis of the state is Cincinnati, which was long the most populous of the Western cities, and was hence called the "Queen of the West". Cincinnati is distinguished for its beautiful suburbs, its extensive manufactures, its pork-packing establishments, and its domestic commerce.

Cleveland, the second city of the state, has a large trade, extending to Canada and the Lake Superior mining-region. It contains manufactories of various kinds, petroleum-refineries, ship-yards, etc. Toledo, with its important railroad, canal, and lake connections, is a great shipping and distributing point. Dayton is a manufacturing city, in the fertile Miami (*mi-am'i*) Valley.

The first permanent settlement in what is now Ohio was made at Marietta in 1788. The early comers suffered much from the Indians, who defeated an expedition led against them by General St. Clair in 1791. In 1794, General Wayne inflicted a severe defeat on the hostile tribes in the northwest of the state, where the county and town of Defiance still bear the name of the fort he erected. After this, immigrants poured in from the East.

Map Questions.—Bound Kentucky. What part of the state is mountainous? Into what do all the rivers of Kentucky flow? What river separates Newport from Covington? How is Mammoth Cave situated? Why does not the sun rise at Frankfort at the same time that it does at Washington? When it is noon at Washington, what is the time at Louisville? Name some of the principal places in Kentucky, on the Ohio River.

Bound Ohio. What natural highway of trade with Canada is open to Ohio? How can Ohio communicate with the Gulf of Mexico? Name two rivers of Ohio that belong to the St. Lawrence system. Name three that belong to the Gulf system. What do you often find situated at or near the mouth of a river? Why are towns thus located? Give examples of towns so situated in Ohio. What railroad center is in the north of Ohio? In the middle of the state? In the south? Where is Sandusky, interested in the lake-fisheries? Where is Springfield, well known for its mowers and reapers? Where is the manufacturing city of Zanesville?

Indiana is distinguished for its fertile soil, which yields plenteous food-crops, and supports cattle and swine in great numbers. There is an abundance of black-walnut, oak, hickory, ash, maple, and other valuable woods. Wyandotte (*wi-a̭n-dot'*) Cave, near the Ohio, almost equals Mammoth Cave as a natural curiosity.

Indianapolis, "the Railroad City," is the capital and metropolis. It is a great center of trade and manufacturing industry, and is the largest city in the Union not on navigable waters. Evansville, next in size to the capital, is situated in a rich coal and iron region. Fort Wayne, the third city of the state, is the emporium of a productive farming district, and manufactures, on an extensive scale, machinery, hubs, spokes, and wheels. Terre Haute (*tĕr'rḙh hote*) and New Albany are manufacturing cities; the latter carries on, besides, an active river-trade.

Illinois, the fourth state of the Union in population, ranks first in the production of wheat and oats. Bordering on Lake Michigan, and having the Mississippi and the Ohio on its boundaries, it enjoys great natural advantages for commerce. It has more miles of railroad than any other state (7,955). A canal connecting Chicago with Peru, at the head of steamboat navigation on the Illinois River, establishes communication between the Great Lakes and the Mississippi.

Springfield, the capital, contains a fine State-house, recently erected (*see engraving, p. 52*). Chicago, the metropolis of the state (population, more than half a million), is surpassed in extent of commerce only by New York. It is the greatest grain-market in the world, and the chief pork-packing city and emporium for live-stock in the United States.

The farm-products annually shipped from this city exceed $200,000,000 in value, of which grain and flour constitute one-third. Grain is received in bulk; in order to be transshipped, it is raised by machinery into elevator-warehouses of vast capacity, whence it is discharged into boats or cars. Every twenty-four hours, about 375 railroad trains enter and leave Chicago. Manufactures are varied and extensive. The city is supplied with water from Lake Michigan by two tunnels extending two miles under the lake. The whole business part of the city was destroyed by fire in 1871, but was rapidly rebuilt more handsomely than before. Chicago has a well-planned system of boulevards and parks, the latter covering nearly two thousand acres.

Peoria and Quincy are next in size to the metropolis; they owe their prosperity mainly to their railroad connections and manufacturing industry. Peoria contains large distilleries.

Map Questions.—Bound Indiana. To what are most of the rivers of Indiana tributary? Name the principal branch of the Ohio in Indiana. Where is Bloomington, the seat of the State University? With what city is Evansville connected by a canal, now useful mainly for the water-power it affords? Where is South Bend, near which the University of Notre Dame (*no't'r dahm*) is situated? What took place near Lafayette? *The battle of Tippecanoe, in which General Harrison broke the power of the Indians in the Wabash valley (1811).—(Consult Quackenbos's " History of the United States," p. 342.)*

Bound Illinois. Name the chief tributaries of the Mississippi in this state. Name some places in Illinois on the Mississippi River. What city is in the lead region? What city derives its water-power from the Fox River? From the Rock River? Where is Galesburg? Bloomington? Where is Jacksonville? Joliet? In descending the Ohio River from Pittsburgh, what important places on the right bank would you pass? On the left?

Michigan ranks foremost among the states in the production of sawed lumber. It consists mainly of two peninsulas. The Northern Peninsula is noted for its copper and iron; the Southern, for its grain, fruits, maple-sugar, wool, lumber, and salt. On the shore of Lake Superior are the famous Pictured Rocks, sandstone cliffs worn into fantastic shapes by the waves and weather.

Lansing, a railroad center and seat of trade, is the capital. Detroit, "the City of the Straits," carries on a large commerce with Canada, and a still larger domestic trade, especially in grain, lumber, and provisions. Its manufacturing establishments include flouring-mills, saw-mills, iron-works, copper-smelting works, etc. An important frontier post in the last war with Great Britain, it was surrendered to the British in 1812, and retaken in 1813.—(*Consult Lossing's "Field-Book of the War of 1812," p. 289.*)

Grand Rapids, Bay City, and East Saginaw, are manufacturing cities. Ann Arbor is the seat of the Michigan University.

Wisconsin.—Grain and lumber are the chief exports of this state. Pine-forests cover extensive areas in the north and east. Lead and zinc are mined in the southwestern part. Fishing is an important branch of business on the shores of the lakes.

French Jesuits first explored this region, and founded missions among the native tribes. Mounds scattered through Wisconsin and other North Central States, in some cases curiously shaped like beasts, birds, fish, etc., are attributed to a race which preceded the Indians in the Mississippi Valley, and to which the name of *Mound-builders* has been applied.

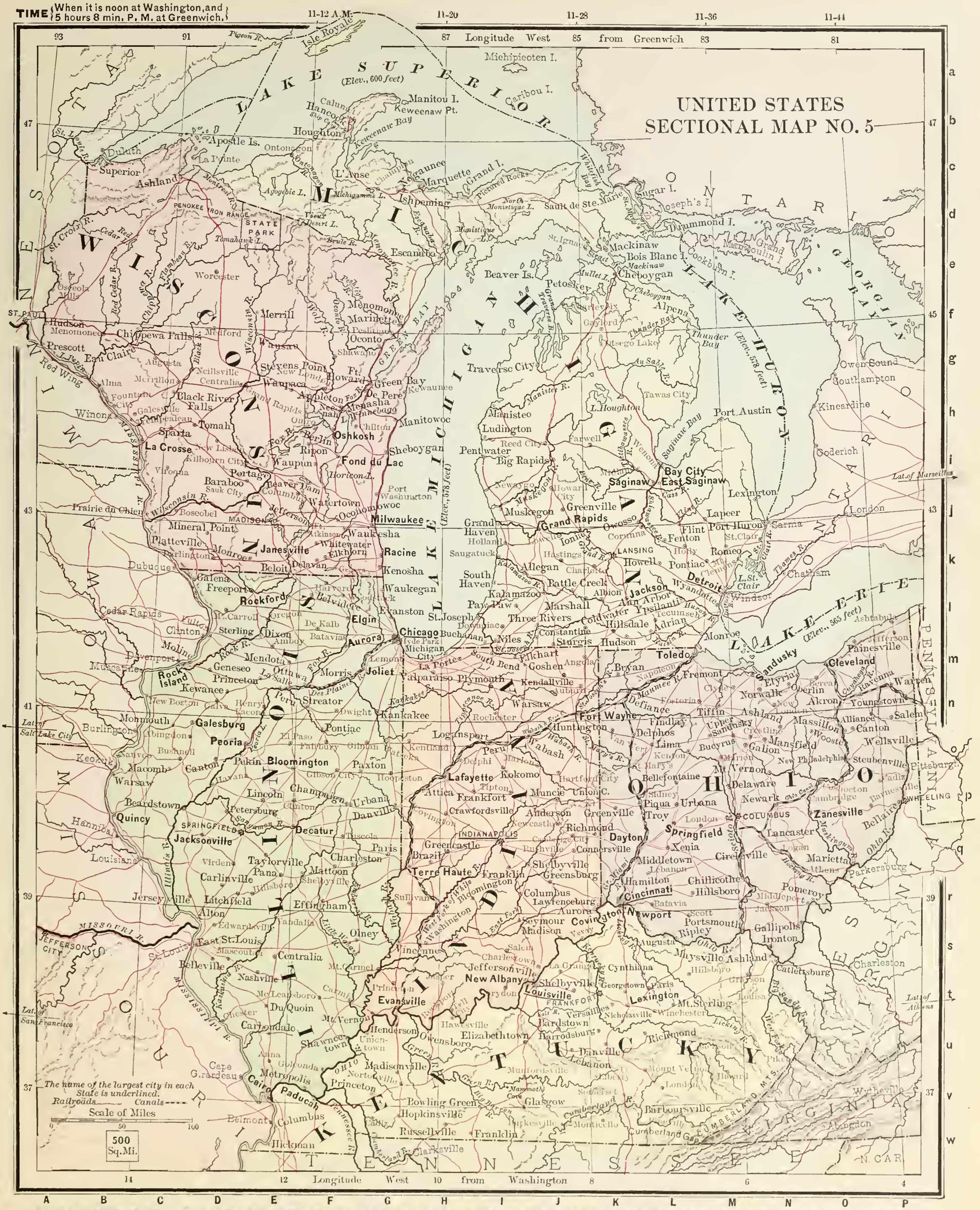
Madison is the state-capital and the seat of the University of Wisconsin. Milwaukee, the metropolis and principal railroad center, receives and ships vast quantities of grain. Racine (*ra̭-seen'*) is noted for its extensive factories. Oshkosh manufactures lumber on a large scale. La Crosse ships grain, lumber, etc.

Map Questions.—Bound Michigan. To what system do all the rivers of Michigan belong? By what are Lakes Michigan and Huron connected? Lakes Superior and Huron? Lakes Huron and Erie? What three cities near Saginaw Bay are engaged in the manufacture of lumber and salt? Where is Marquette, the depot of the iron region? Where is the copper region?

Bound Wisconsin. Name the chief bay of Lake Michigan. To what two systems do the rivers of Wisconsin belong? What low mountain-range is in Wisconsin? What rivers separate Wisconsin from Minnesota? Name the principal lake-ports of Wisconsin. What place is at the head of Lake Superior? How can a boat-load of lumber be taken by fresh-water channels from Milwaukee to New Orleans? How is Fond du Lac situated? Janesville? La Crosse (*lah kross*)? Watertown? Eau Claire (*o-klayr'*)?

Questions.—Mention for what each of the following states is remarkable—name its capital—describe its largest city—tell what you know about its other important cities: Kentucky, Ohio, Indiana, Illinois; Michigan, Wisconsin. State some facts relating to the early history of Ohio. Which of the above states contain canals? Describe the Pictured Rocks. Who first explored Wisconsin? Describe the mounds found in some of the North Central States. Who are supposed to have built them?

TIME {When it is noon at Washington, and 5 hours 8 min. P. M. at Greenwich,}



CENTRAL AND NORTH CENTRAL STATES-EASTERN DIVISION.

Missouri, in population, ranks first among the states west of the Mississippi River. Coal-measures underlie one-third of the state. Iron is abundant; Iron Mountain and Pilot Knob are made up almost entirely of ore of a superior quality. Not far from the latter mountain is obtained the nickel used in coining.

Lead abounds south of the Missouri River, and is mined in great quantities at several points, especially at the young city of Joplin. As a wine-producing state, Missouri ranks next to California. Manufactures, already large, are rapidly increasing.

Jefferson City is the capital. St. Louis (population, 350,518) is the metropolis of the state and of the whole Mississippi Valley. The terminus of twenty railroads, and situated near the junction of great rivers that traverse what has been called "the Garden of the World," St. Louis is a leading center of internal commerce. It is the third manufacturing city of the country, and in the quantity of flour produced ranks first.

Kansas City and St. Joseph, the second and third cities of the state, command a large trade in the Missouri Valley. The former is a great market for live-stock.

Kansas is the largest of the Central States; its population has increased with wonderful rapidity. Corn and wheat are the staple grains. In the eastern part, timber fringes the streams. Its excellent pasturage has made Kansas an important stock-raising state.

Lead deposits are found in southeastern Kansas. Bituminous coal is mined near Fort Scott, Osage′ City, and in Leavenworth. The Missouri is the only navigable river of Kansas; Leavenworth, the largest city of the state, and Atchison, which ranks third in population, are on its bank. Topeka, the second city in size, is the capital. Lawrence contains the State University.

Map Questions.—Bound Missouri. What part of Missouri is swampy? To what system do all the rivers of Missouri belong? Where are Iron Mountain and Pilot Knob situated? What railroad center is between the Missouri and the Osage′ River? When it is noon at Washington, what is the time at St. Louis? What places in Missouri are on the Missouri River? On the Mississippi River? Which of these is connected by railroad with St. Joseph?

Bound Kansas. What is the shape of Kansas? What is the general slope of the country? What part of the state is most thickly settled? Why? Name the two chief rivers of Kansas. What do you find following the banks of these rivers? What places are on the Kansas River?

Iowa consists of fertile prairies, and ranks among the foremost states in the raising of live-stock and the production of grain, flax, and potatoes. There is an abundant supply of bituminous coal. Large quantities of lead-ore are mined and smelted near Dubuque (*du-buke′*), which is the leading emporium for this important lead region.

Iowa lies on the principal highways of travel and traffic between the Pacific coast and Eastern cities. Three trunk lines, connecting the Union Pacific Railroad with Chicago, traverse the state. Crossing the Mississippi respectively at Dav′enport, Burlington, and Clinton, they have helped to build up large cities at these points. At Des Moines (*de-moin′*), the capital and largest city of Iowa, a handsome State-house is in course of erection.

Minnesota contains the Height of Land which separates the head-waters of the Mississippi from rivers of the Hudson Bay system. Eight thousand lakes lend beauty to this state. Extensive "pineries" cover the northeastern part. The elk, the deer, and fur-bearing animals, abound in the thinly-settled districts. The numerous rivers are useful to the lumberman for floating down his logs, and to the manufacturer for the water-power they afford.

St. Paul, the capital, maintains an extensive trade with the Northwest. Minneapolis, situated at the Falls of St. Anthony, contains the largest flouring-mill in the United States, and produces great quantities of flour and lumber; it is the seat of the State University. The two places just named are the most populous cities of the state. Winona and Red Wing are noted for the export of wheat. Stillwater is an important lumber-market.

Thirty years ago this region was a wilderness; it is now the seat of thriving farms and busy cities. A large part of the population consists of foreigners, particularly Swedes, Norwegians, and Germans. The Sioux (*soo*) massacre, to which about seven hundred white settlers in the southwest of the state fell victims, took place in 1862. The Sioux were soon overpowered and removed to reservations farther west.—(*Consult Bryant and Murch's "History of the Sioux Massacre," p. 83.*)

Map Questions.—Bound Iowa. What rivers form parts of the boundary? Name the chief rivers of this state tributary to the Mississippi. To the Missouri. Which drain the greater part of the state? What places are on the Mississippi River? Where is Iowa City, which contains the State University?

Bound Minnesota. What rivers and lakes in part separate Minnesota from Canada? In what lake does the Mississippi rise? What other rivers flow from lakes? Why does the Red River of the North flow in a different direction from the Mississippi? Through what Canadian province, and into what lake, does the Red River flow? Imagine yourself descending the Mississippi from Minneapolis to St. Louis; what places on your right would you pass? What places on your left? What products are freighted down the river?

Nebraska.—The name of this state, from Indian words meaning "water-valley," has reference to the valley of the Platte River, which crosses from the western boundary to the Missouri. In the northwest of the state are dry and barren tracts; but in most parts the soil is fertile, being in the east well adapted to grain-growing and in the west to pasturage. Wood is scarce, but forest-trees are planted by thousands every year.

Lincoln is the capital, and here the State University is located. Omaha, the metropolis, is most favorably situated for trade with the river towns on the Missouri, and with the regions traversed by the Union Pacific Railroad. Nebraska City enjoys a large local trade, and Fremont′ is a shipping-point for grain.

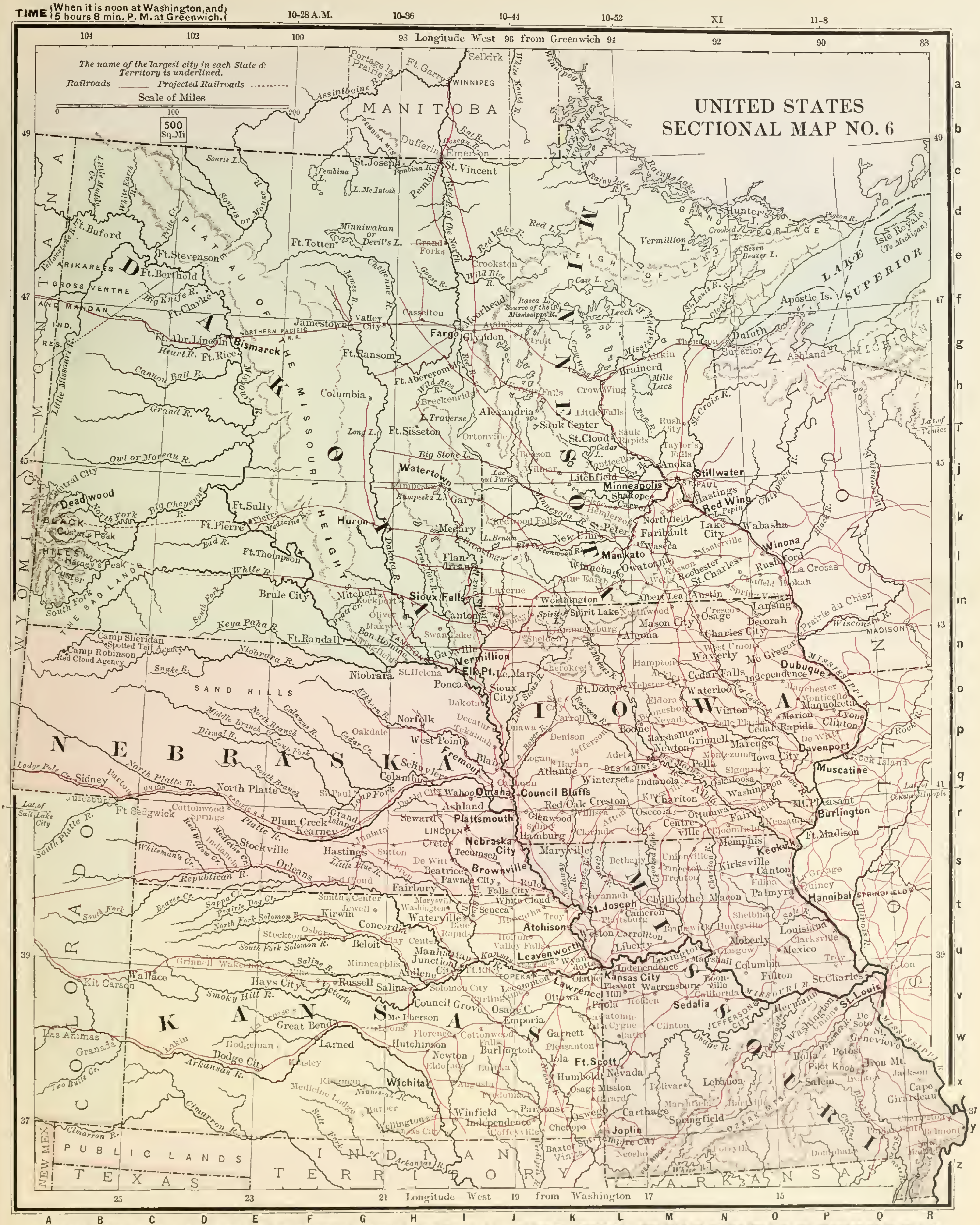
Dakota is a large territory, with a sparse but rapidly-increasing population. It contains the best of wheat-lands, timber on the banks of the streams, abundant game for the hunter and trapper, and valuable deposits of gold and other minerals in the Black Hills region. Agriculture and mining are the leading interests.

Yankton, the capital and largest city, has connections with Iowa and the East by railroad, and with the principal Missouri ports by steamboat. Deadwood is the depot of the mining districts.

Map Questions.—Bound Nebraska. What river ultimately receives all the streams of Nebraska? In what part of Nebraska are most of the towns? Why? Where are barren sand-hills? To what physical division of the United States does western Nebraska belong? Name some of the principal places on the Missouri. Point toward Omaha.

Bound Dakota. What part of the territory is most thickly settled? Why? Imagine yourself at Yankton; point toward Chicago—St. Louis—New Orleans. In descending the Missouri River from Yankton to the Mississippi, what important places on the right bank would you pass? What places on the left bank? How can you go from Omaha to Chicago? From Omaha to St. Louis? What railroad is in northern Dakota? What makes Bismarck important? Where are the Black Hills? For what are they noted?

Questions.—How does Missouri rank in population? In what does it stand next to California? Give an account of its mineral resources. Of its cities. Describe Kansas; its cities. Give an account of Iowa. Of its minerals. Its cities. What does Minnesota contain? What can you say of its lakes? Its wild animals? Its important places? Its population? The Sioux massacre? State what you can about Nebraska and its important places. About Dakota and its two principal towns.



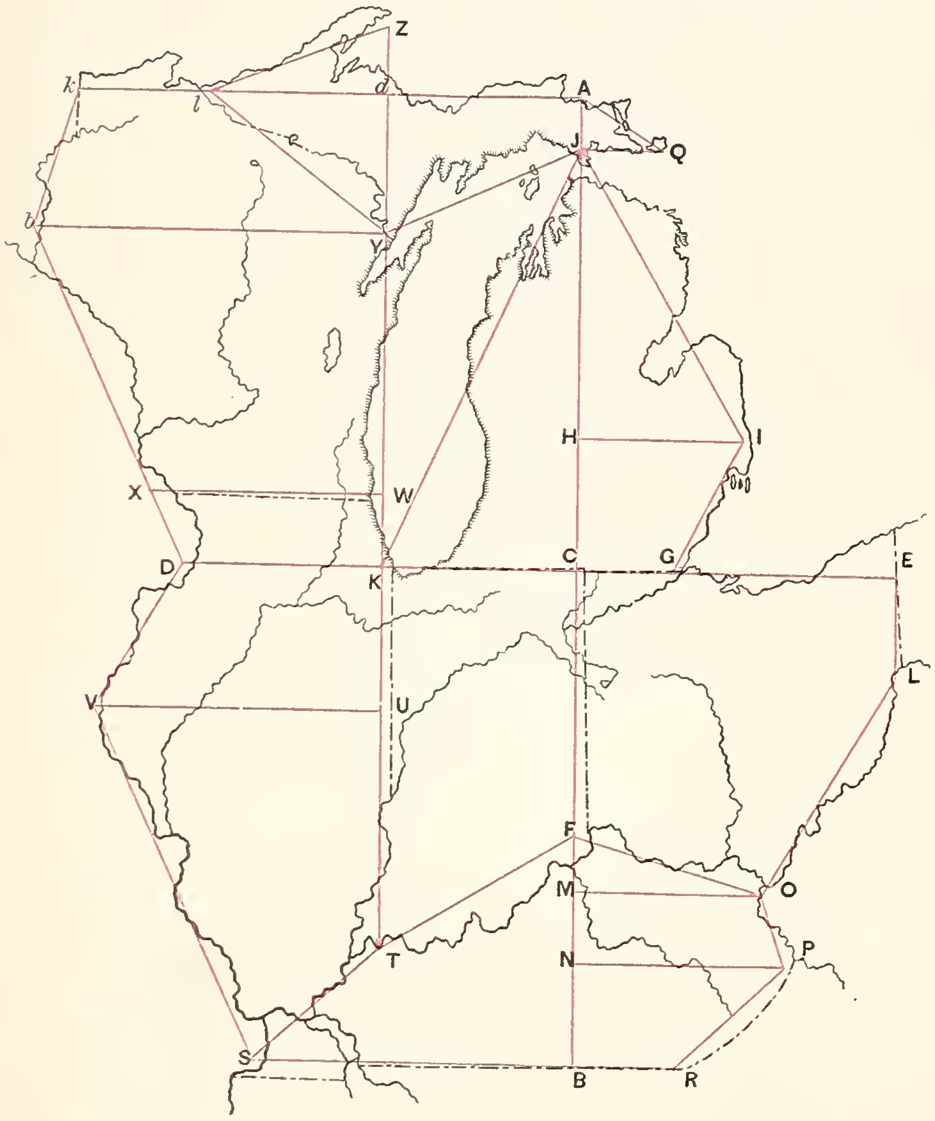
CENTRAL AND NORTH CENTRAL STATES–WESTERN DIVISION.

IRON MINE ON PILOT KNOB.
THE CITY OF ST. LOUIS.
CASTING A CYLINDER.

The Metropolis of the Mississippi Valley.

DIRECTIONS FOR DRAWING THE MAPS.

SECTIONAL MAP No. 5.



Draw the vertical line A B = 675 mi.

Take A J = 30 mi., A H = 235 mi., H C = 87 mi., C F = 185 mi., F M = 40 mi., and M N = 52 mi.

Draw the horizontal lines J Q = 60 mi., H I = 115 mi., C E = 226 mi., M O = 133 mi., N P = 153 mi., and B R = 73 mi.

Draw the vertical line E L = 68 mi. Take C G = 66 mi.

Draw A Q, J I, I G, L O, O P, P R, and O F.

Draw the horizontal lines A *k* = 364 mi., C D = 285 mi., B S = 235 mi. Take C K = 140 mi.

Draw the vertical lines K T = 270 mi., and K Z = 384 mi.

Take K U = 96 mi., K W = 51 mi., W Y = 180 mi., A *d* = 138 mi., *d l* = 133 mi. Draw the horizontal lines U V = 208 mi., Y *b* = 255 mi.

Draw S T, T F, S V, V D, D *b*, *b k*, *l* Z, *l* Y, Y J, and J K.

Draw the horizontal line W X.

With the aid of the construction-lines, draw the outline of each state. Complete the Wabash River. Insert the Scioto, Kentucky, Illinois, and Wisconsin Rivers; also, the capital and the largest city of each state.

◆

SECTIONAL MAP No. 6.

Draw the vertical line A B = 850 mi.

Take A E = 60 mi., E F = 165 mi., F G = 158 mi., G H = 38 mi., H I = 60 mi., I J = 106 mi., J K = 55 mi.

Draw the horizontal lines A C = 66 mi., E L = 320 mi., F M = 175 mi., I O = 335 mi., J P = 275 mi., and B T = 106 mi.

Draw the vertical lines T S = 32 mi., and T Q = 146 mi. Draw the horizontal line S R = 336 mi. Draw C L, L M, M O, O P, P R, and I Q.

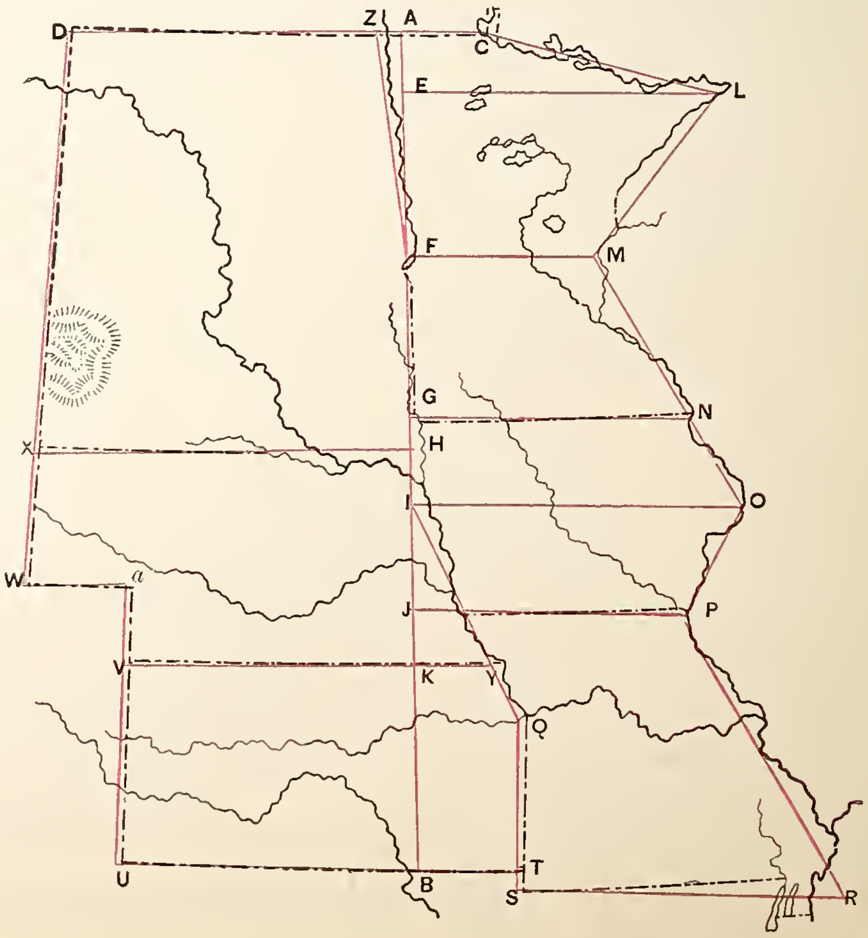
Draw the horizontal lines K Y and G N.

Draw the horizontal lines B U = 306 mi., and K V = 295 mi.

Draw U V, and continue it to *a*, making V *a* = 81 mi.

Draw the horizontal lines *a* W = 106 mi., and A D = 350 mi. Draw D W. Take A Z = 38 mi. Draw Z F, and the horizontal line H X.

Guided by the construction-lines, draw the outline of each state. Complete the upper part of the Mississippi River. Insert the Missouri, Platte, Kansas, Arkansas, and Des Moines Rivers; also, the capital and the largest city of each state.



ROCKY MOUNTAIN AND PACIFIC STATES AND TERRITORIES.

Extent.—The Rocky Mountain State is Colorado; the Pacific States are Oregon, California, and Nevada. These states and the seven territories grouped with them form the Western section of the Union. Embracing part of the Great Plains, they extend across the Rocky Mountain Plateau, the Sierra Nevada, and the Pacific Slope, to the Pacific Ocean. Their united areas equal about one-third of the area of the entire country, while their population is less than twice that of the city of New York.

The maps on pp. 61, 62, show these states and territories separated into two Divisions, a Northern and a Southern. Name the state and territories comprised in the Northern Division. Name the states and territories of the Southern Division. Which state and territories are traversed by the Rocky Mountains?

Map Questions.—(*Refer to Physical Map of United States, pp. 34, 35.*) As regards elevation, of what does this Western section of the United States consist? Where are the highest plateaus? Where alone are low plains found? What great watershed is in this section? What rivers of the Gulf System rise in the Rocky Mountains? What rivers of the Pacific System?

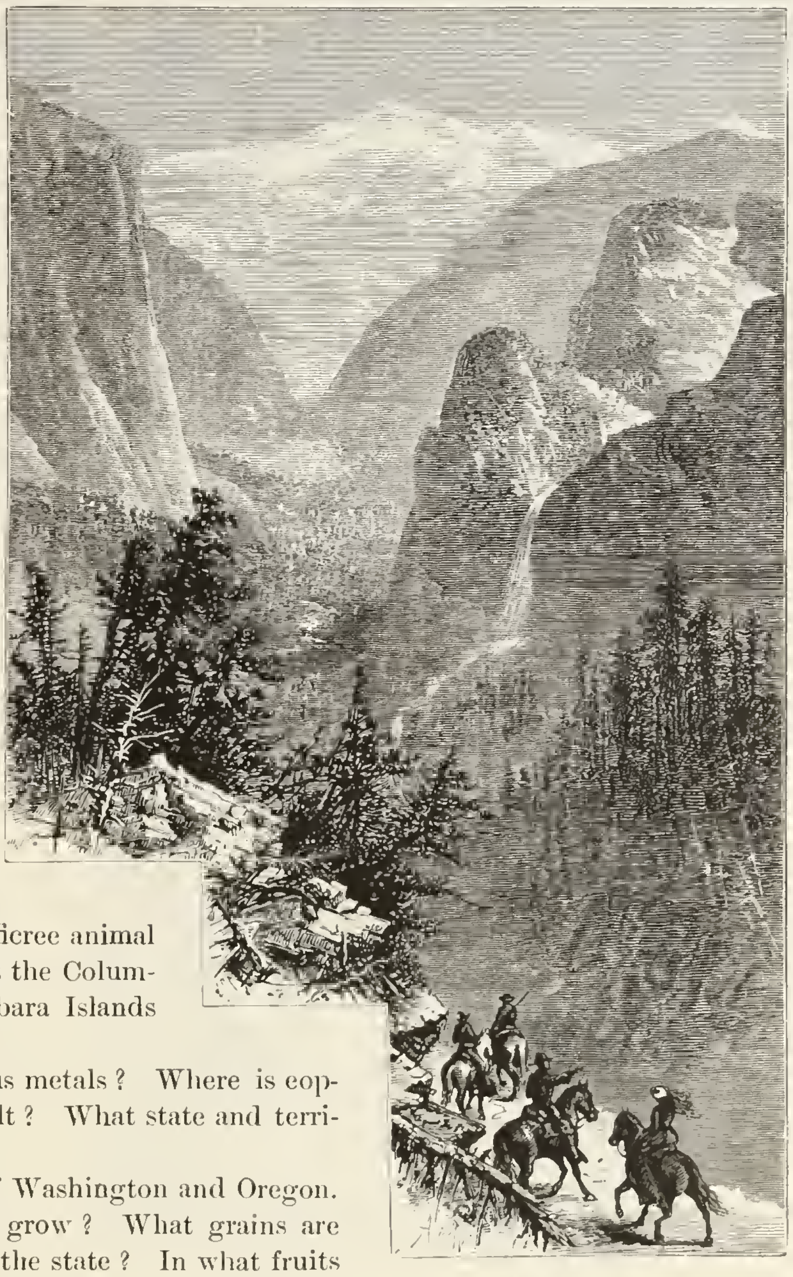
In what state does most of the Great Basin lie? Name the chief river of the Great Basin. Into what does the Humboldt River flow? How does the low plain of California, traversed by the Sacramento and San Joaquin (*ho-ah-keen'*) Rivers, extend?

What volcano is in the northwest? What peaks are in California? In Colorado? In what part of California is a desert?

What part of this section is embraced in the Pasture Region? What part lies in the Mineral Region? Mention the principal wild animals of the Rocky Mountain Region. What fierce animal is found in the Sierra Nevada? For what fish is the Columbia River noted? By what are the Santa Bar'bara Islands frequented?

What parts of this section yield the precious metals? Where is copper found? Coal? Quicksilver? Borax? Salt? What state and territories contain iron?

Mention some of the principal forest-trees of Washington and Oregon. On which slope of the Cascade Range do they grow? What grains are most cultivated in California? In what part of the state? In what fruits does southern California abound? What does Colorado produce abundantly? Mention some of the agricultural products of Oregon.



Yosemite Valley.

Boundaries.—Size.—The boundaries of the states and territories of this section are for the most part regular, following parallels and meridians. The states rank next to Texas in size, California alone being nearly three times as large as all New England.

Surface.—This is the most elevated part of the United States. While the mountains generally run parallel to the Pacific coast, there are numerous cross-ranges. In Colorado, these, with the main ranges, inclose several high valleys called Parks.

The mountain-regions are remarkable for their *cañons* (*kan'-yunz*), long, narrow gorges worn by streams to a great depth, between rocky walls that rise from the water's edge. The Grand Cañon of the Colorado, in Arizona, is 217 miles in length; its walls rise perpendicularly to a height of three thousand feet or more above the river.

Consult Powell's "Exploration of the Colorado River," p. 80.

Climate.—Soil.—The temperature varies according to the latitude and elevation; but, as a rule, summer and winter here differ less in their mean temperature than in the Atlantic States, and in the Northwest the climate is milder than in corresponding latitudes in the East.

Mountains condense the moisture in the air, and cause precipitations of rain or snow. Accordingly, the mountains near the coast deprive the winds from the Pacific of their moisture, and on the Pacific slope the rainfall is abundant, the valleys are fertile, and forests of magnificent timber are found.

The Rocky Mountains also have an abundance of rain and snow, which feed the rivers that flow down either slope and fertilize their banks. But the winds, having thus parted with their moisture, bring little or no rain to the thirsty plateau on either side of the Rocky Mountains, and it is consequently barren. The farmers can obtain crops only by irrigation; and to this in settled districts they resort, leading the water from streams, in channels dug through the adjacent country in some cases for many miles.

Natural Curiosities.—Among the mountains the scenery is indescribably grand.

Natural curiosities abound. Of these, California has its share. Among the most interesting wonders of this state are the Yosemite (*yo-sem'e-te*) Valley, the groves of Giant Trees on the slopes of the Sierra, mud-volcanoes, geysers, and the "Petrified Forest," containing parts of large redwood-trees turned into stone.

Yosemite was the name of an Indian chief, whose tribe once occupied the country surrounding the valley; the word means "full-grown grizzly bear". The famous valley (*see engraving*) is a narrow gorge, about a mile wide and eight miles in length. On each side granite cliffs rise almost perpendicularly, and stupendous domes and peaks tower toward the sky. The Merced (*mḙr-sade'*) River traverses the valley. On this stream, and on creeks which plunge down from the plateau above, are waterfalls of surpassing beauty—one of them, the Yosemite Fall, being the highest in the world.

The Yosemite Valley was ceded by Congress to the State of California, on condition that it be preserved as a public park for ever.—(*Consult "Picturesque America," vol. i., p. 464.*)

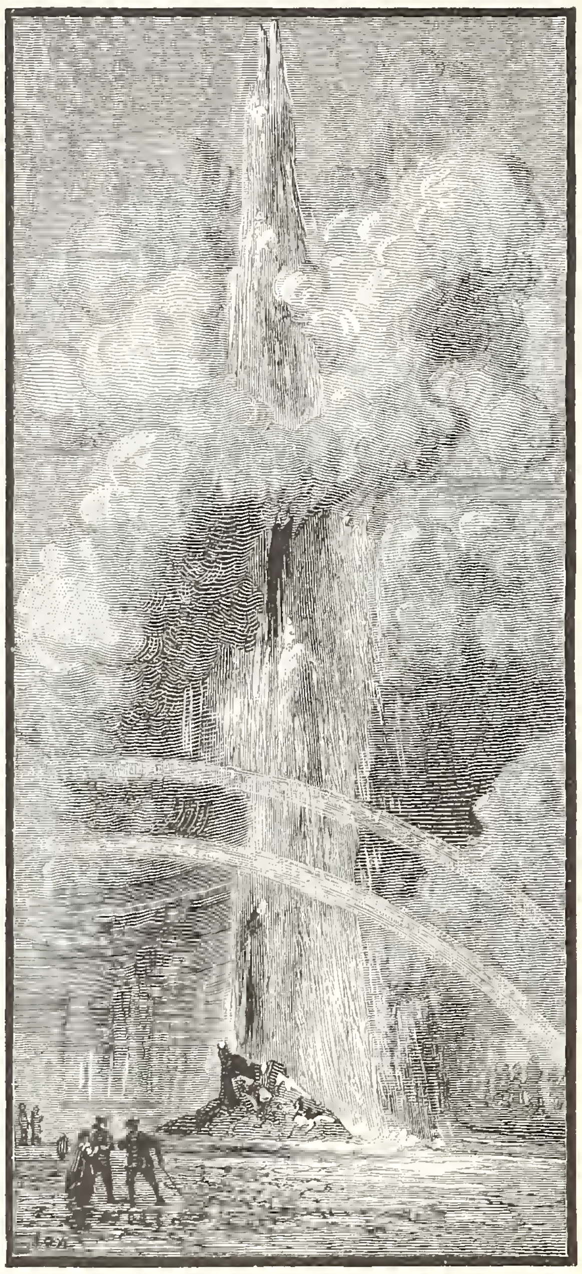
Questions.—Name the Rocky Mountain State. Name the Pacific States. Name the seven territories grouped with them. What section of the Union do these form? Give an idea of their united areas and population. How do the states rank in size? Describe the surface. How do most of the mountain-ranges trend? How are the Parks of Colorado formed? What are Cañons? Describe the Grand Cañon of the Colorado.

Give an account of the climate and soil. How are crops obtained on the arid plains? Mention some of the natural curiosities of California. Describe the Yosemite Valley, from the engraving. What does the word *Yosemite* mean? Why was the valley so called? Tell all that you know about it.

The National Park, situated mostly in the northwestern part of Wyoming, is a tract set apart by Congress as a place of public resort. Its area is three-fourths that of the whole state of Connecticut; and no other region in the world of equal size contains so many great natural curiosities.

The Giant, one of the remarkable geysers of the National Park, is represented below. When in eruption, it sends up from its crater a vast volume of boiling water to the height of 140 feet. The geysers of this "Northern Wonderland" are near the headwaters of the Madison River, one of the streams that form the Missouri.—(*Consult Le Conte's "Elements of Geology," p. 96.*)

Yellowstone Lake has an elevation of about a mile and a half above sea-level; from it issues the Yellowstone River, the largest tributary of the Missouri. The falls and Grand Cañon on this river are among the wonders of the Park.



The Giant Geyser.

Advantages for Commerce.—The Pacific coast of the United States lacks the advantages for commerce which the Atlantic coast possesses in its numerous bays and gulfs, convenient harbors, and navigable streams.

Puget (*pu'jet*) Sound and San Francisco Bay are the chief indentations. On the Pacific side of the Rocky Mountains, the Columbia River and several of its branches, the Sacramento and the San Joaquin in California, and the Colorado as far as the Grand Cañon, are navigable; on the eastern side of the water-shed, only the Missouri and the Yellowstone.

For internal trade, therefore, the chief reliance must be on railroads, and these are rapidly building. California has 2,220 miles of railroad; Colorado, 1,531.

Industrial Pursuits.—In Nevada and the territories, manufactures are limited. Except on the Pacific coast and in portions of Colorado, Utah, and New Mexico, where irrigation is used, agriculture receives comparatively little attention. In many sections "bunch-grass" abounds, and stock-raising is an important interest; but mining is the leading pursuit.

Mining.—While coal, iron, and other minerals abound, mining is here carried on principally for the purpose of obtaining the precious metals, which are widely distributed throughout the mountainous regions. The annual yield of gold and silver in the United States amounts to about $80,000,000, the whole world's production being estimated at $200,000,000.

The gold and silver of our country come almost entirely from the Rocky Mountain and Pacific States and Territories. In their production, California and Colorado take the lead; Nevada, Arizona, Utah, Montana, Dakota, Idaho, and Oregon, follow in the order named. California yields the most gold, Colorado the most silver.

When gold, having been washed down in the course of time from the worn and crumbling rocks of mountain-slopes, occurs in clay or gravel near the surface, it is obtained by hydraulic mining. Water is brought in ditches, sometimes many miles, to hills above the deposits; whence it is carried down in iron pipes, and directed, in streams of tremendous power, against the bank to be excavated. The earth is washed away and carried through long sluice-boxes, in which the heavy metal falls to the bottom and is caught, while the lighter waste material passes off.

When gold occurs in veins, it is generally associated with quartz. In quartz-mining, the rock is got out, sometimes from considerable depths, and reduced to powder by machinery, so as to detach every particle of metal. The quartz is then washed away with water, quicksilver being used to combine the fine metallic particles with itself in an "amalgam," from which the gold is afterward separated.

Silver generally occurs in veins. It is often found in ores of lead.

Historical Facts.—Oregon and the territories of the Northern Division were formed from the Louisiana Purchase (*p. 29*).

The war with Mexico, which followed the annexation of Texas, resulted, in 1848, in the cession to the United States (for $15,000,000) of a vast tract of Mexican territory; and five years afterward a smaller tract, south of the Gila (*he'lah*) River, was purchased from Mexico. From the lands thus obtained, the states and territories of the Southern Division were almost wholly formed.

At the time of its cession, California had a sparse population, mostly of Spanish descent; but no sooner was gold discovered on a branch of the Sacramento River (1848), than thousands flocked to this part of the Pacific coast. San Francisco, from an insignificant village, soon grew to be a great commercial city. The precious metals have since been discovered at numerous points, and large mining-towns, inhabited principally by immigrants from the older states, now dot what was the Western wilderness.

This section contains many Indians, and has been the seat of recent Indian wars, arising from the refusal of the natives to settle on reservations. The Government maintains forts at different points.

NORTHERN DIVISION.

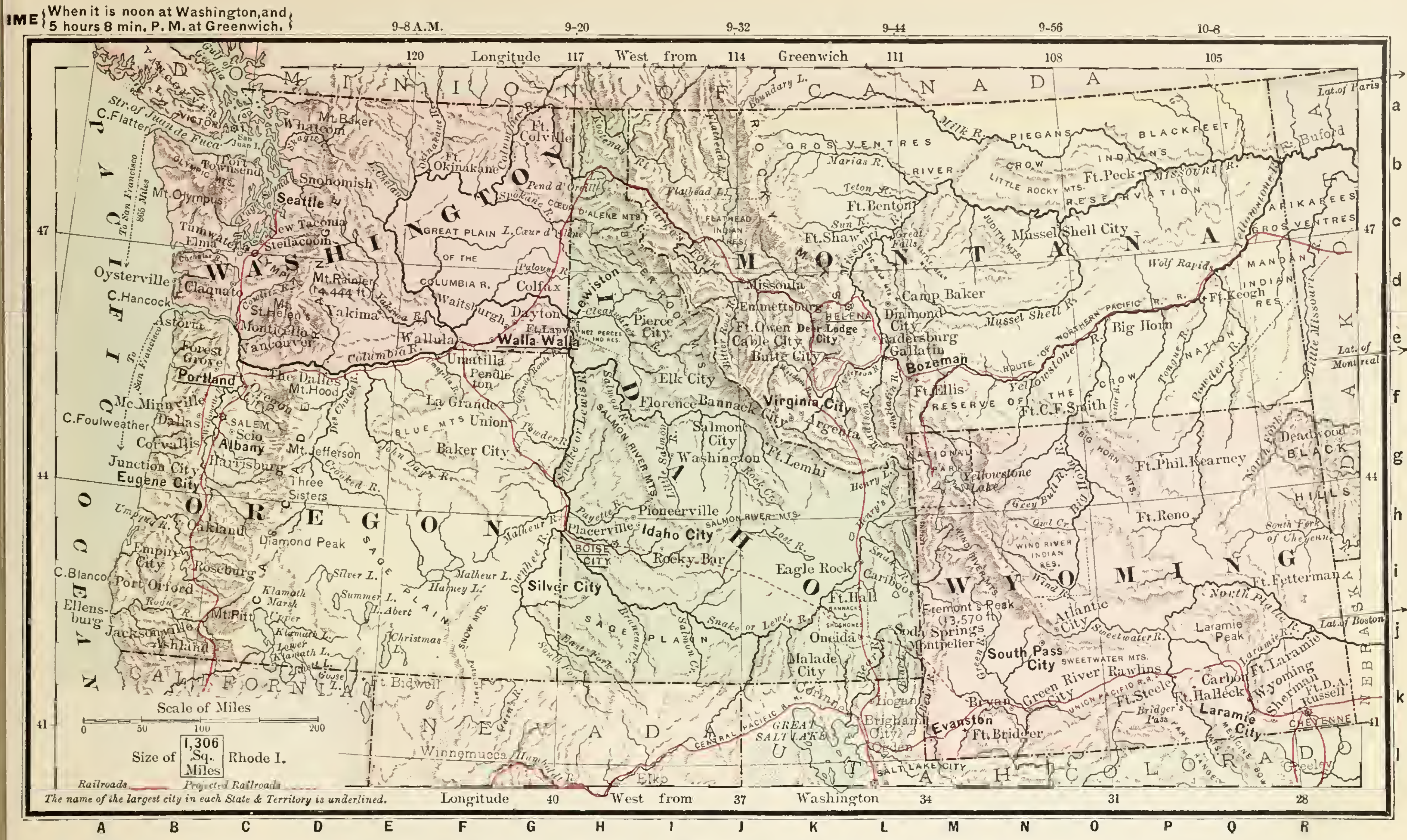
Oregon is an agricultural and wool-growing state. Wheat is the staple. Fruits are abundant, including apples of superior quality. On the western slopes of the Cascade Range are forests of gigantic firs, pines, cedars, and spruces, that furnish the best masts and spars in the world.

Copper and iron deposits have a wide range. Lumber, flour, and a variety of articles for domestic use, are manufactured. Salmon are canned, for export, at Astoria and other places. Most of the towns lie in the valley of the Willamette (*wil-lah'met*) River.

Salem, the capital of the state, contains fine public buildings and flourishing manufacturing establishments. Portland, the largest city and chief center of commerce, is connected by steamers with San Francisco and the towns on Puget Sound; it exports grain, flour, wool, and lumber. Oregon City is a manufacturing place.

Map Questions.—Bound Oregon. Why is this not a corn-raising state? Describe the Cascade Range. Name some of its peaks. Where are the Klamath (*klah'mat*) Lakes? What is the Dalles (*dalz*)? *A town called from the Great Dalles, or rapids, in the Columbia River.* Name the principal towns on the Willamette River. Why are there no towns in the southeast of the state? From what does the Columbia River separate Oregon?

Bound Washington. What river crosses Washington? What is the chief branch of the Columbia River? Describe the Snake or Lewis River. On what sound are the chief ports of Washington? Bound Idaho. Bound Montana. Name the principal rivers of Montana. Describe the Yellowstone River. Bound Wyoming. What famous peak is in Wyoming? What mountain-range? What railroad crosses the southern part?



UNITED STATES—SECTIONAL MAP No. 7.

ROCKY MOUNTAIN AND PACIFIC STATES AND TERRITORIES.

NORTHERN DIVISION.

The Territories.—Washington, in its fine harbors, has superior advantages for commerce; in its noble forests, for lumbering; and, in the water-power of its rapid streams, for manufacturing. OLYMPIA is the capital; Walla Walla is the largest town.

Idaho has fertile valleys, in which wheat, barley, oats, and potatoes, are cultivated; but mining and stock-raising receive the chief attention. The most profitable mining districts are in the southwest, in the vicinity of Idaho City, Silver City, and BOISE′ (*boy′see*) CITY, the capital.

Montana is a fine mining and grazing territory, containing valuable deposits of gold, silver, copper, and iron, and having thousands of acres covered with bunch-grass. HEL′ENA, the capital, and Virginia City, are the trade-centers of rich mining districts.

Wyoming has abundant mineral resources, as yet but partially developed. Coal is mined to supply the railroad and stations on its line. CHEYENNE (*shi-en′*), the capital, is a busy distributing-point. Lar′amie City, a depot for extensive stock-raising districts, and Ev′anston, near the coal-mines, are growing rapidly.

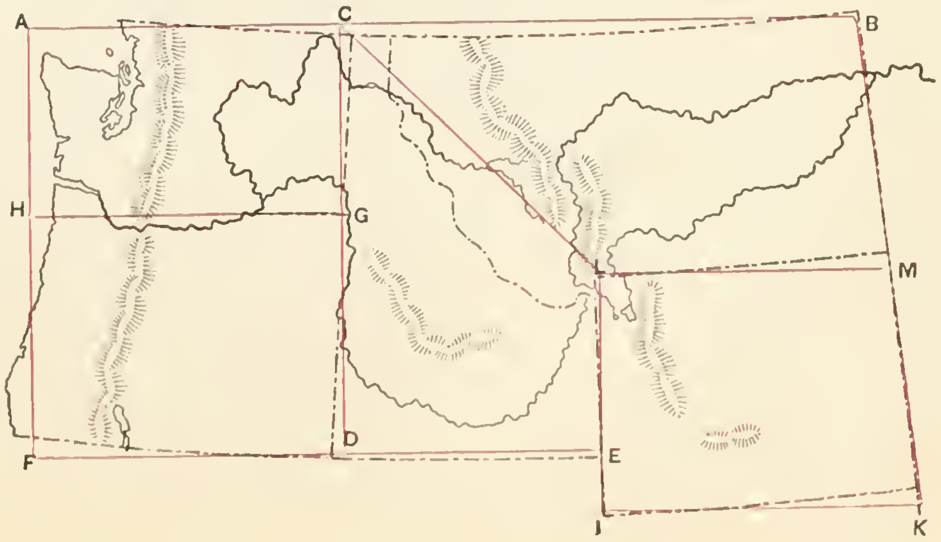
Questions.—Give an account of the National Park; the geysers; the Giant Geyser; Yellowstone Lake and River. How does the Pacific coast of the United States compare with the Atlantic coast in commercial advantages? Mention the principal indentations of the Pacific coast. Name the navigable rivers of this section. What follows with respect to railroads?

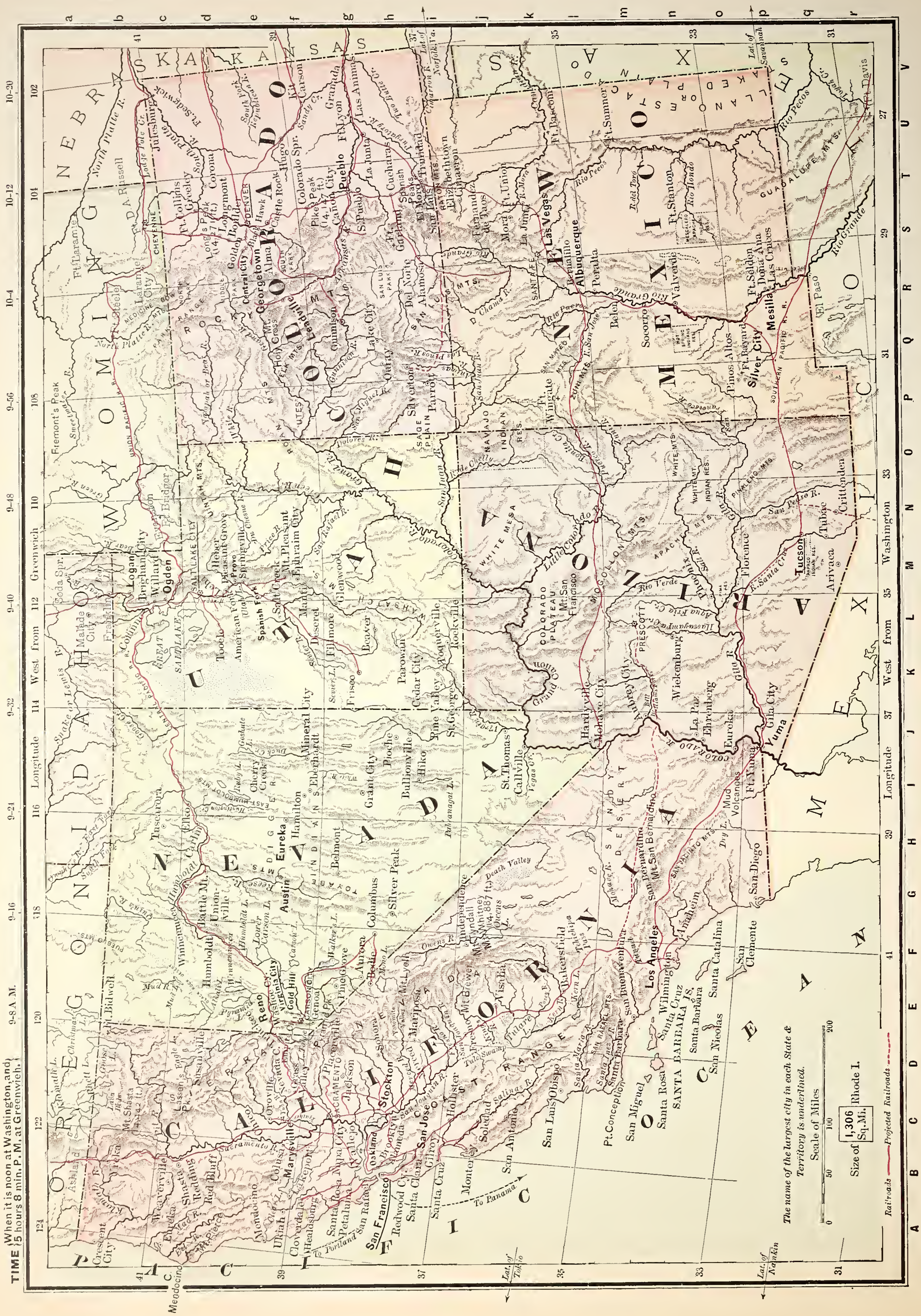
Give an account of the industrial pursuits of this section. For what metals chiefly is mining carried on? Name the states and territories distinguished for producing the precious metals. Describe hydraulic mining; quartz-mining. State what facts you can, connected with the history of this section. What wars have occurred here? Give an account of Oregon and its important places. Of Washington. Idaho. Montana. Wyoming.

DIRECTIONS FOR DRAWING THE MAP.

Draw the horizontal line A B = 960 mi.
Take A C = 356 mi. Draw the vertical line C D = 490 mi.
Take C G = 220 mi. Draw the vertical line A F = C D.
Draw the horizontal lines D F, G H, and D E = 300 mi.
Draw the vertical lines E J = 70 mi., and E L = 210 mi.
Draw the horizontal line J K = 382 mi.
Draw B K, C L, and the horizontal line L M.

With the aid of the construction-lines, draw the outline of Oregon and of each territory. Continue the Columbia River through Washington. Insert Clarke's Fork and the Snake River; the Willamette River; the upper part of the Missouri, in Montana; Yellowstone Lake and River; the Cascade Range and the Rocky Mountains; each capital, and Portland, Oregon. Lay off the National Park. Locate Mount Hood, Mount St. Helen's (a volcano), and Fremont's Peak.





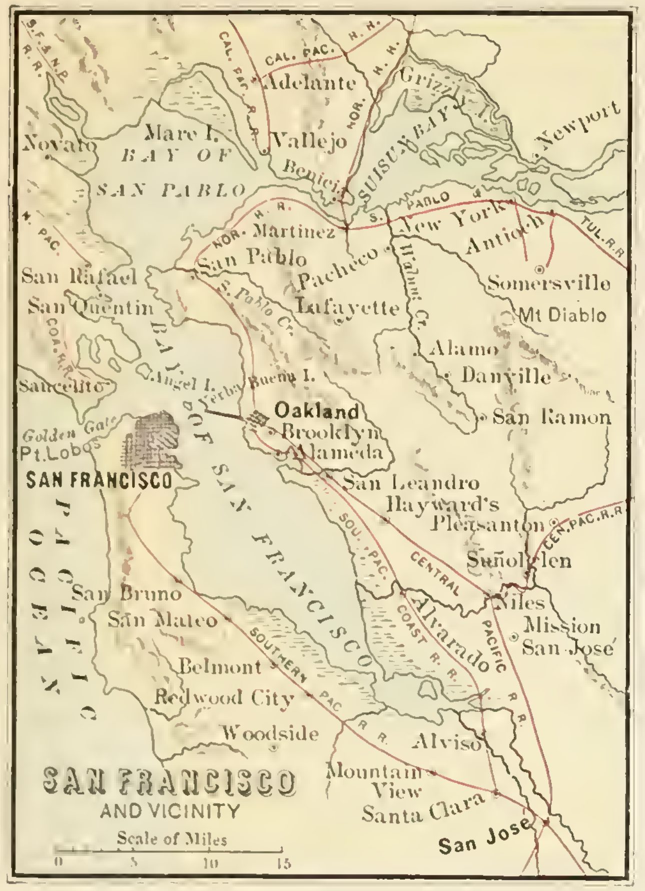
UNITED STATES—SECTIONAL MAP No. 8.

ROCKY MOUNTAIN AND PACIFIC STATES AND TERRITORIES.

SOUTHERN DIVISION.

SOUTHERN DIVISION.

California produces more gold, quicksilver, wine, wool, and barley, than any other state. Wheat of the best quality is its staple crop and leading export. Its fruits are remarkable for their excellence, its vegetables for their size. Sugar is made from the beet. Flour, lumber, woolens, machinery, etc., are extensively manufactured. The year has two seasons—the dry, from May to November; the rainy, from November to May. There are many Chinese in California.



Questions.—On what bay is San Francisco? How far from the Pacific Ocean? What connects the bay with the Pacific? What railroad follows the west side of the bay? To what place in Arizona does this railroad extend? What city is opposite San Francisco? How is Oakland connected with San Francisco? *By a ferry.* Where is San José (*ho-say'*)?

Sacramento, the capital, is extensively engaged in manufacturing and in local trade. San Francisco, the largest city, has a magnificent harbor. Communicating with the interior by railroads, and with Mexico, South America, Japan, China, Australia, and various domestic ports, by steamers, it is the commercial metropolis of the Pacific coast. Its exports, including gold and silver, amount to about $75,000,000 annually. Oakland is remarkable for its beautiful dwellings and gardens; near it is the University of California. Stockton is an important wheat-market.

Map Questions.—Bound California. How is Mt. Shasta situated? Between what mountains does the central valley of California extend? By what rivers is this valley traversed? Where is Marysville? What is the principal place in southern California? On what railroad is Los Angeles (*loce an'jeh-lez*)?

Nevada is in parts dry and barren, but contains excellent pasture-lands, and the most profitable silver-mines in the world. These mines lie on the eastern slope of the Sierra Nevada, at and near Virginia City, which has in consequence become the chief business center. Silver-bearing lead-ores and quartz-deposits are met with in many parts of the state, and other minerals abound. Timber is scarce. Carson City is the capital.

Colorado is noted for its healthy climate, its medicinal springs, and its advantages for mining and stock-raising. The precious metals, coal, and iron, are distributed through the mountain-regions. In the Parks and where irrigation can be used, grain, root-crops, and fruits, are produced abundantly. Cattle and sheep find pasturage throughout the year, for the dry summer converts the luxuriant grass of the plains into nutritious hay. Among the wild animals are the bison, elk, deer, and antelope. Manufactures are increasing with the rapidly-growing population.

Denver, at the junction of several railroads, is the capital. Pueblo (*pweb'lo*) is the emporium of southern Colorado. Leadville, situated nearly 11,000 feet above sea-level, derives importance from its rich mines.

Map Questions.—Bound Nevada. What is peculiar about its rivers? How is Eure'ka situated? Bound Colorado. Name its principal parks. What great rivers have their headwaters in Colorado? How is Georgetown situated? Central City? Bound Utah. What mountains are in Utah? What lakes? Where are the chief towns in Utah? Where is Lo'gan? Pro'vo? Bound New Mexico. What river drains the central part? Bound Arizona. Describe the Gila River. Where are the Mogollon (*mo-go-yone'*) Mountains? How is Yuma situated?

The Territories.—Utah is inhabited principally by a peculiar sect called Mormons, or Latter Day Saints; they succeed in obtaining good crops, raise live-stock, manufacture many articles for home use, and have developed rich mineral treasures. Salt Lake City, the capital and largest place, is the terminus of three railroads. Ogden is a thriving railroad town.

New Mexico was early settled by the Spanish; Santa Fé (*fay*), the capital, is the oldest town in the United States except St. Augustine. The vine flourishes in the southern part. Stock-raising is the favorite pursuit. Las Vegas (*lahs vay'gahs*) exports wool in large quantities. There are abundant mineral resources, but they are undeveloped.

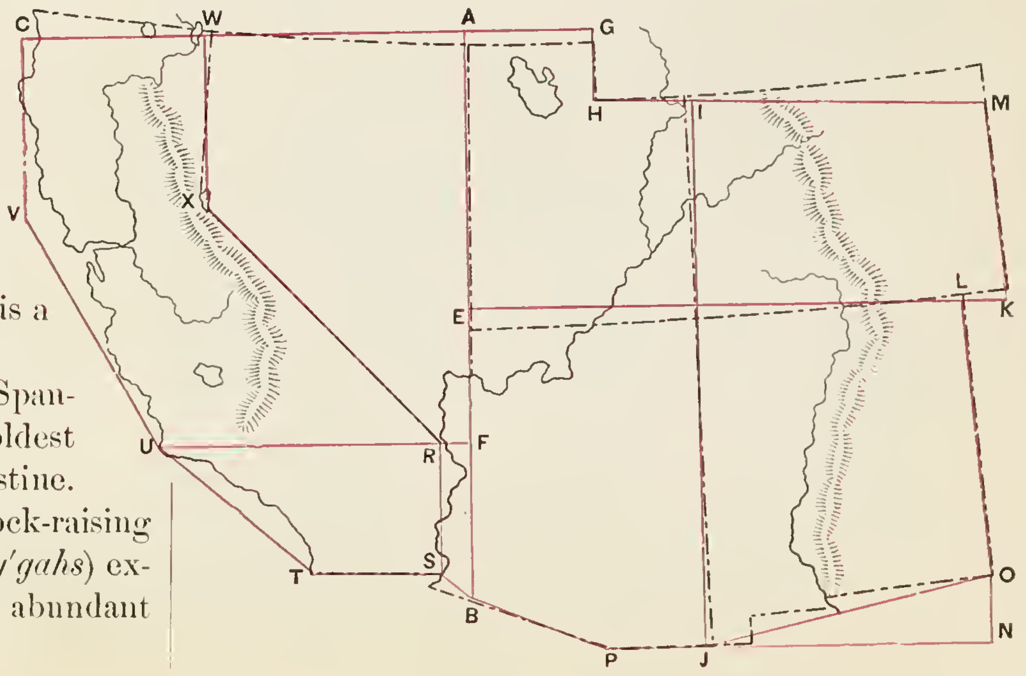
Arizona has a hot, dry climate. Mining and wool-growing are the absorbing interests. Prescott, the capital, lies in a district rich in the precious metals. Tucson (*too-sŏn'*) exports gold-dust, hides, and wool.

Questions.—In what does California take the lead? Mention its agricultural products. Its principal manufactures. Describe its seasons. Name and describe its cities. Give an account of Nevada and its mines. What is the capital? The chief business center? For what is Colorado noted? State what you can about its minerals; agricultural products; pasture-lands; wild animals; important places. Give an account of Utah. Of New Mexico. Of Arizona. On what railroads can a person go from San Francisco to Denver, and through what important places will he pass?

DIRECTIONS FOR DRAWING THE MAP.

Draw the vertical line A B = 710 mi.
Take A E = 355 mi., and E F = 160 mi.
Draw the horizontal lines A C = 550 mi., A G = 150 mi.
Draw the horizontal line E K = 670 mi. Take K L = 56 mi.
Draw the vertical line G H = 85 mi.
Draw the horizontal line H M = 483 mi. Draw M K.
Take H I = 115 mi. Draw the vertical line I J = 680 mi.
Draw the horizontal lines J P = 115 mi., J N = 360 mi.
Draw the vertical line N O = 75 mi.
Draw L O, J O, P B, and the horizontal line F U = 390 mi.
Take F R = 45 mi., and A W = 325 mi.
Draw the vertical lines R S = 155 mi., W X = 216 mi.
Draw the vertical line C V = 216 mi.
Draw the horizontal line S T = 155 mi.
Draw S B, T U, U V, and R X.

Draw the outlines of the states and territories. Complete the Colorado River. Insert the Sacramento and San Joaquin Rivers, the Sierra Nevada and the Rocky Mountains, Great Salt Lake, each capital, and San Francisco.



REVIEW OF THE UNITED STATES: STATISTICAL SUMMARY.

Name.	Abbreviation.	Familiar Name.	Area in sq. miles.	Population according to U. S. Census of 1880.*	Inhabs. to a sq. mile.	Electoral Votes.	Capital.	Largest City.	Miles of Railroad in 1881.	Admitted as a State in
Maine	Me.	Pine-Tree State	33,040	648,936	19	7	Augusta	Portland	1,013	1820
New Hampshire	N. H.	Granite State	9,305	346,991	37	5	Concord	Manchester	1,015	†
Vermont	Vt.	Green Mountain State	9,565	332,286	35	5	Montpelier	Rutland	912	1791
Massachusetts	Mass.	Bay State	8,315	1,783,085	214	13	Boston	Boston	1,893	†
Rhode Island	R. I.	Little Rhody	1,250	276,531	221	4	Providence, Newport	Providence	210	†
Connecticut	Conn.	Land of Steady Habits	4,990	622,700	125	6	Hartford	New Haven	954	†
New York	N. Y.	Empire State	49,170	5,082,871	103	35	Albany	New York	6,019	†
New Jersey	N. J.	Garden State	7,815	1,131,116	145	9	Trenton	Newark	1,701	†
Pennsylvania	Pa.	Keystone State	45,215	4,282,891	95	29	Harrisburg	Philadelphia	6,243	†
Delaware	Del.	Blue Hen State	2,050	146,608	72	3	Dover	Wilmington	280	†
Maryland	Md.	Old Line State	12,210	934,943	77	8	Annapolis	Baltimore	976	†
Virginia	Va.	Old Dominion	42,450	1,512,565	36	11	Richmond	Richmond	1,826	†
West Virginia	W. Va.	New Dominion	24,780	618,457	25	5	Wheeling	Wheeling	694	1863
North Carolina	N. C.	Old North State	52,250	1,399,750	27	10	Raleigh	Wilmington	1,499	†
South Carolina	S. C.	Palmetto State	30,570	995,577	33	7	Columbia	Charleston	1,429	†
Georgia	Ga.	Empire State of the South	59,475	1,542,180	26	11	Atlanta	Atlanta	2,535	†
Florida	Fla.	Peninsular State	58,680	269,493	4	4	Tallahassee	Key West	530	1845
Alabama	Ala.	......	52,250	1,262,505	24	10	Montgomery	Mobile	1,851	1819
Mississippi	Miss.	Bayou State	46,810	1,131,597	24	8	Jackson	Vicksburg	1,183	1817
Louisiana	La.	Pelican State	48,720	939,946	19	8	Baton Rouge	New Orleans	633	1812
Texas	Tex.	Lone Star State	265,780	1,591,749	6	8	Austin	Galveston	3,293	1845
Arkansas	Ark.	Bear State	53,850	802,525	15	6	Little Rock	Little Rock	896	1836
Tennessee	Tenn.	Volunteer State	42,050	1,542,359	37	12	Nashville	Nashville	1,824	1796
Kentucky	Ky.	Blue Grass State	40,400	1,648,690	41	12	Frankfort	Louisville	1,598	1792
Missouri	Mo.	Iron State	69,415	2,168,380	31	15	Jefferson City	St. Louis	4,011	1821
Kansas	Kan.	Garden of the West	82,080	996,096	12	5	Topeka	Leavenworth	3,439	1861
Ohio	O.	Buckeye State	41,060	3,198,062	78	22	Columbus	Cincinnati	5,912	1802
Indiana	Ind.	Hoosier State	36,350	1,978,301	54	15	Indianapolis	Indianapolis	4,454	1816
Illinois	Ill.	Prairie State	56,650	3,077,871	54	21	Springfield	Chicago	7,955	1818
Michigan	Mich.	Lake State	58,915	1,636,937	28	11	Lansing	Detroit	3,931	1837
Wisconsin	Wis.	Badger State	56,040	1,315,497	23	10	Madison	Milwaukee	3,130	1848
Iowa	Io.	Hawkeye State	56,025	1,624,615	29	11	Des Moines	Des Moines	5,235	1846
Nebraska	Neb.	Black Water State	76,855	452,402	6	3	Lincoln	Omaha	2,000	1867
Minnesota	Minn.	Gopher State	83,365	780,773	9	5	St. Paul	Minneapolis	3,108	1858
Colorado	Col.	Centennial State	103,925	194,327	2	3	Denver	Denver	1,531	1876
Oregon	Ore.	Beaver State	96,030	174,768	2	3	Salem	Portland	582	1859
California	Cal.	Golden State	158,360	864,694	5	6	Sacramento	San Francisco	2,220	1850
Nevada	Nev.	Silver State	110,700	62,266	.56	3	Carson City	Virginia City.	769	1864
TERRITORIES.										Organized.
Dakota	Dak.	......	149,100	135,177	......	......	Yankton	Yankton	1,265	1861
Montana	Mont.	......	146,080	39,159	......	......	Helena	Helena	48	1864
Idaho	Id. T.	......	84,800	32,610	......	......	Boisé City	Boisé City	220	1863
Washington	Wash.	......	69,180	75,116	1	......	Olympia	Walla Walla	274	1853
Wyoming	Wyo.	......	97,890	20,789	......	......	Cheyenne	Cheyenne	472	1868
Utah	U. T.	......	84,970	143,963	2	......	Salt Lake City	Salt Lake City	770	1850
New Mexico	N. Mex.	......	122,580	119,565	......	......	Santa Fé	Santa Fé	643	1850
Arizona	Ariz.	......	113,020	40,440	......	......	Prescott	Tucson	384	1863
Indian	Ind. Ter.	......	64,690	('70) 68,152	1	......	Tahlequah	Tahlequah	275	......
Alaska	Alas.	......	577,390	30,178	......	......	Sitka	Sitka	......	......
District of Columbia	D. C.	......	70	177,624	2,537	......	......	Washington	36	......

* According to the Census of 1880, the total population of the United States, exclusive of Indian Territory and Alaska, is 50,155,783.

† One of the original thirteen states.

GENERAL QUESTIONS.—As each state is mentioned by the teacher, give its familiar name, its capital, and largest city. Name the five largest states in the Union. What is meant by electoral votes? *The number of votes that a state is entitled to cast, by its electors, for president and vice-president.* To what is the number of electoral votes proportioned? *To the population.* Which state has the greatest number of electoral votes? How many? Which states have the smallest number? Which state was the first admitted into the Union?

In sailing along the coast of the United States from Brownsville, Texas, to Key West, what states would you pass? What river-mouths?

Why are the New England States manufacturing rather than agricultural? Why are the Southern States agricultural rather than manufacturing? Which states owe their population mainly to their mineral treasures? Of what importance is the Hudson River to the state of New York? The Mississippi to the North Central States?

On what waters are the great commercial cities situated? Why are they situated there? Which group of states produces the most wheat? The most gold? Imagine yourself starting from the eastern terminus of the Northern Pacific Railroad to coast along the lake-shores as far as Buffalo, what states would you pass, and what large lake-ports?

SCENE IN CENTRAL AMERICA.
GATHERING COCHINEAL, MEXICO.
SUGAR-HARVEST, WEST INDIES.

MEXICO: CENTRAL AMERICA: THE WEST INDIES.

MEXICO.

Area, 741,860 square miles. Population, 9,656,668.

Surface.—Mexico consists principally of lofty table-land, bordered on the east and west by mountain-chains having the same trend as the Pacific coast. Both coasts are skirted by narrow lowland plains. The peninsula of Lower California is traversed by a ridge sloping abruptly to the water on either side.

Across the highest part of the Mexican Plateau extends a series of volcanoes, three of which rise above the snow-line.

The loftiest of these volcanoes is Popocatepetl (*po-po-kah-tay-petl'—smoking mountain*), the second mountain of North America in height. It sends forth smoke, but has had no eruption for 340 years. Within its crater, which is a mile across and 1,000 feet deep, are enormous beds of pure sulphur. For the purpose of obtaining this mineral, several persons make their abode in the crater, ascending and descending its walls with the aid of ropes.

Jorullo (*ho-rool'yo*), another volcano of this chain, is remarkable for having been thrown up in a single night (in 1759), from fertile fields of sugar and indigo, to a height of 1,600 feet above the level of the plateau. Jorullo is farther from the sea than active volcanoes generally are; it is now nearly extinct.

Climate.—Productions.—Differences of elevation give rise to great variety in the climate and productions.

The lowlands of the coast are hot, damp, and unhealthy, the yellow fever being a frequent visitant; here the productions are tropical, and the banana and plantain are used largely for food.

Next in elevation are the temperate regions, "the paradise of Mexico," to which most of the interior plateau belongs. The climate is here free from extremes, healthy, and delightful. At different heights, sugar-cane, cotton, coffee, indigo, maize (the most important grain of Mexico), tobacco, wheat, and luscious fruits, flourish luxuriantly.

The cold regions embrace the loftiest table-lands and the mountainous districts, where the climate is severe and the soil less productive.

The year is divided into a dry and a rainy season, the latter commencing in May and lasting from five to six months. During the dry season, violent northers, or gales from the north, frequently sweep across the Gulf of Mexico.

Among the special products of Mexico are vanilla, the fruit or pod of a climbing-plant, and the beans of the caca'o-tree, from which chocolate is made. Chocolate was introduced into Europe from Mexico, where it was used as a beverage at the time of the Spanish conquest (1521). The Emperor Montezuma drank his chocolate, flavored with vanilla, from a golden cup.

The aga've, American aloe, or maguey (*mą-gway'*), is cultivated for its juice, which, when about to flower, it yields abundantly; out of this juice is made a wine called pulque (*pull'kay*), of which the people are very fond. The fibers of a plant related to the agave form what is called Sisal (*se-sahl'*) hemp, of which cordage, bags, and hammocks, are made.

The cactus abounds in Mexico; and one variety is cultivated in large plantations for the sake of the cochineal-insect, which lives upon the leaves, and which, when dried, yields the most brilliant crimson dye. The mode of gathering the insects is represented in the above engraving.

Wine is made from the grape, and excellent oil is produced from the olive. Rosewood, mahogany, and dye-woods, are among the forest-products. Tobacco, which is smoked by women as well as men, is raised in enormous quantities.

Minerals.—Mexico has inexhaustible mineral wealth. Its silver-mines have been the most productive in the world, and still yield a large part of the world's supply. Gold, and the useful metals, including tin and quicksilver, are also abundant, as well as the most beautiful varieties of marble. There is a mountain wholly made up of magnetic iron-ore.

Industrial Pursuits.—The people are engaged chiefly in agriculture, stock-raising, and silver-mining. Large farms containing from 20,000 to 30,000 head of cattle are common, and hides are among the exports. Mules and horses are numerous; thousands of the former are used by carriers, and in the mines. Mustangs, sprung from the horses introduced by the Spaniards, rove in wild droves over the northern highlands.

Manufacturing in Mexico is confined chiefly to sugar, tobacco, saddlery, earthen-ware, and other articles for home use.

Foreign commerce, carried on mainly with Great Britain, the United States, and France, is also limited. This is due in part to the difficulty of transportation; for, except between the principal cities, goods are carried by pack-mules or in ox-carts. An extended system of railroads is now, however, in course of construction. No navigable streams penetrate to the interior.

Silver is the great export; the imports consist of woven fabrics, iron-ware, and a variety of manufactured articles—many of which might easily be produced at home.

Inhabitants.—Nearly two-thirds of the population are Indians; some of these are banded together in wandering tribes, while others are engaged in farm-work, mining, etc. The creoles or white natives, descended from the early Spanish colonists, form nearly one-tenth of the population. There are some Europeans, and a few negroes and mulattoes. The remainder of the inhabitants are mainly mestizos (*mes-te'zoce*)—half-breeds, derived from the union of whites and Indians.

The Spanish language prevails, but among the Indians fifty distinct tongues are still spoken. The people are generally indolent; the greater part can neither read nor write. In many of the larger towns, however, common schools are now supported by the state governments, and at the several capitals there are institutions for higher instruction.

Government.—Religion.—Mexico is a republic, composed of twenty-seven states, the territory of Lower California, and the federal district containing the capital. The government resembles that of the United States. Law and order are often violated, and revolutions have been frequent.

All religions are tolerated, but most of the inhabitants are Roman Catholics. Among the Indians are some Pagan tribes.

Historical Facts.—The Mexicans freed themselves from Spanish rule in 1821. Three years afterward a republic was established. Large tracts of territory were lost in consequence of the Texan Revolution (1836) and the war with the United States (1846–1848). In 1863, after the invasion of the country by a French army, Mexico was made an empire, and a European prince was placed on the throne; but within four years the republic was restored.

When Mexico first became known to Europeans, the ruling race was the Aztecs, a people skilled in tilling the soil, in weaving cotton cloth, in working the metals except iron, and in other useful arts. They had schools, a system of writing, a literature, populous cities, and an efficient government. To Mexitli, their god of war, from whom Mexico derived its name, they offered human sacrifices in magnificent temples.—(For a full account of the Aztecs, *see Prescott's "Conquest of Mexico," vol. i., p. 23.*)

Soon after the discovery of America, Cortez, with about six hundred Spaniards, invaded this vast empire, and notwithstanding an heroic resistance effected its conquest (1521). For three hundred years the government was in the hands of Spanish viceroys, who were almost absolute, and kept the natives in ignorance and wretchedness.

Curious remains of the ancient people are still to be seen, in the form of sculptures, bridges, aqueducts, colossal pyramids, and ruined cities. Among these, the ruins of Uxmal (*oox-mahl'*), in Yucatan (*yoo-ka-tan'*), are especially celebrated.—(*Consult Stephens's "Incidents of Travel," vol. ii., p. 420.*)

Cities.—Mexico, the capital and metropolis (population 242,000), is nearly a mile and a half above sea-level; it is a handsome city, situated in the midst of the most sublime mountain scenery.

Le'on, the second city of the republic in size, owes its prosperity to the manufacture of leather, cottons, and woolens. Next in importance are Puebla (*pweb'lah*) and Guadalaxara (*gwah-dah-lah-hah'rah*), both engaged in manufacturing. Vera Cruz (*vay'rah kroos*), connected with the capital by a railroad, is the chief seat of foreign commerce. Acapulco (*ah-kah-pool'ko*) is the principal port on the Pacific.

Questions.—Describe Mexico, as regards elevation. What extends across the highest part of the plateau? Give an account of the loftiest of these volcanoes. For what is Jorullo remarkable? Describe the coast lowlands, as regards climate and productions. The temperate regions. The cold regions. How is the year divided? Mention two special products of Mexico. For what is the agave cultivated? What is Sisal hemp? What is cochineal, and how is it obtained? Name some other Mexican productions.

What minerals does Mexico contain? In what are the people chiefly engaged? What is said of manufacturing in Mexico? Of foreign commerce? What obstacles are in the way of commerce? Name the chief export. The principal imports. Of what classes is the population made up? What language prevails? Describe the people. The educational advantages. The government. The religion. What facts connected with the history of Mexico can you state? Give an account of the Aztecs. What remains are still found? Name and describe the capital. What inland cities are next in importance? Name the chief seaports.

MAP QUESTIONS ON MEXICO, Etc.

Mexico.—In what part is Mexico broadest? Which coast-line is longest? What gulfs indent the coast? Describe the Gulf of California. The Bay of Campeachy. What two peninsulas are in Mexico? From what does the Rio Grande separate Mexico?

Where is El Paso? What railroad will make this town important? Where is Jalapa (*hah-lah'pah*)? What drug, produced in the neighborhood, is named from this city? What port is nearest to the United States? Name two other ports on the eastern coast. With what city is Vera Cruz connected by steamers? Tampico (*tahm-pe'ko*)?

Describe the situation of the Isthmus of Tehuantepec (*tay-wahn-tay-pek'*), which is to be crossed by a railroad already commenced. Of Guanaxuato (*gwah-nah-hwah'to*), the depot of the richest silver and gold region. Where are Monterey (*mon-tay-ray'*) and Buena Vista (*bway'-nah vees'tah*), memorable for victories gained by the United States in the war with Mexico? In what direction from the capital is the manufacturing city of Queretaro (*kay-ray'tah-ro*)? Mount Popocatepetl? New Orleans? Near what lake is the city of Mexico (*see small map*)?

Central America.—Bound Balize (*ba-leez'*). In what direction from Balize is Guatemala (*gwah-tay-mah'lah*)? What state is east of Guatemala? Bound Honduras (*hon-doo'ras*). What part of Honduras is crossed by a railroad? In what state is the southern terminus of this road? Bound San Salvador (*sahn sahl-va-dor'*).

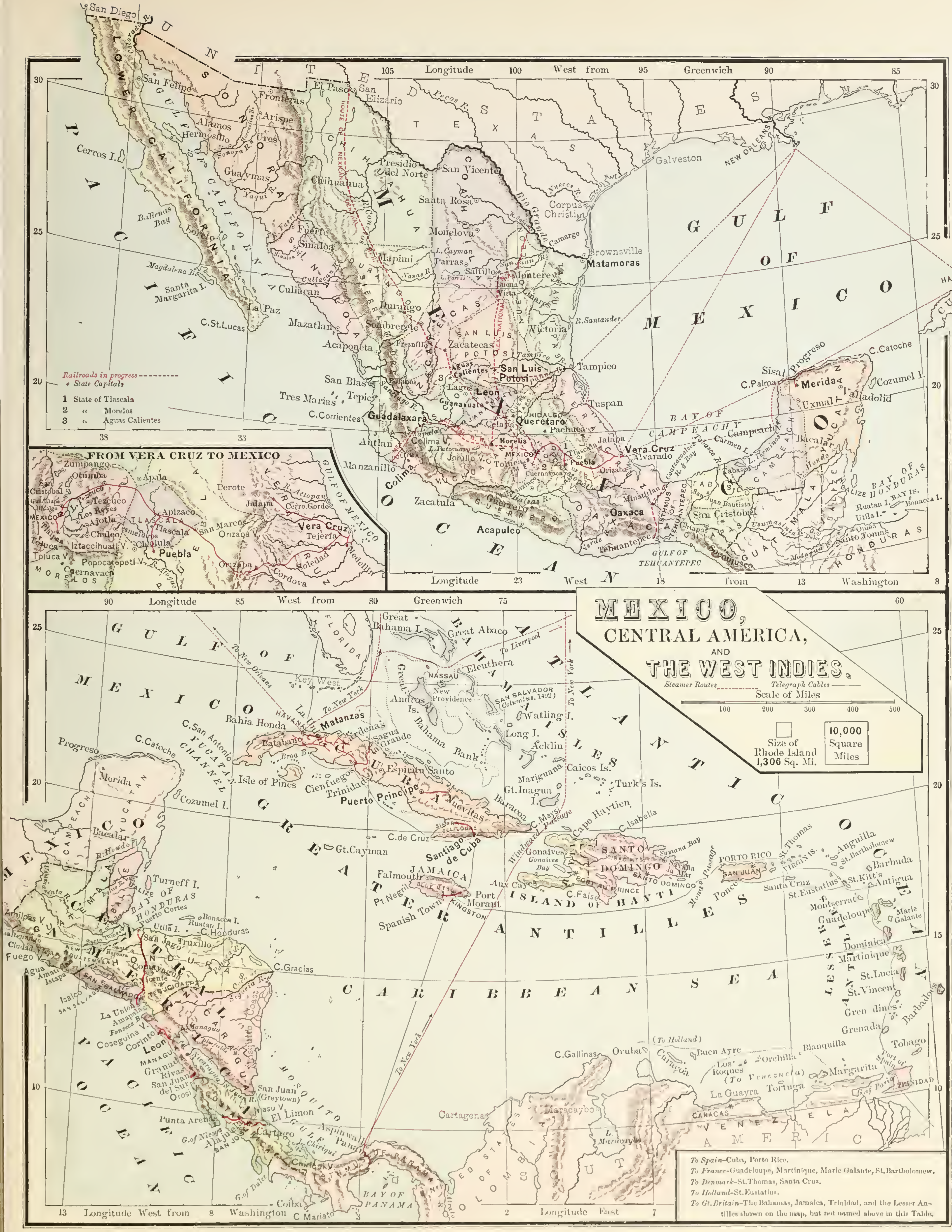
Bound Nicaragua (*nik-a-rah'gwah*). What large lake is in this state? What is the outlet of Lake Nicaragua? Into what does the San Juan (*sahn hoo-ahn'*) River flow? Which is the most southerly state of Central America? Bound Costa Rica (*kos'tah re'kah*). By what is Costa Rica crossed? How is Greytown situated?

West Indies.—How are the Bahama Isles situated? What town is the seat of government? On what island is Nassau? What memorable event is connected with the Bahamas? What four islands are called the Great Antilles (*ahn-teel'*)? Of these, which is the largest? The smallest? Which has the most railroads?

What separates Cuba from Yucatan? With what cities of the United States is Havan'a connected by steamers? With what city, by submarine telegraph? What important city is east of Havana? Between what two republics is the island of Hayti (*hay'te*) divided? Which is in the eastern part? Name the capital of each.

Where is Jamaica? What is its capital? How is Kingston situated? With what place is it connected by a submarine cable? How are St. Thomas and Santa Cruz (*sahn'tah kroos*) situated? To what country do they belong (*see lower right-hand corner of map*)? Name the chief islands of the Lesser Antilles. What large island on the South American coast belongs to Great Britain?

MEXICO, CENTRAL AMERICA, AND THE WEST INDIES.



To Spain–Cuba, Porto Rico.
To France–Guadeloupe, Martinique, Marie Galante, St. Bartholomew.
To Denmark–St. Thomas, Santa Cruz.
To Holland–St. Eustatius.
To Gt. Britain–The Bahamas, Jamaica, Trinidad, and the Lesser Antilles shown on the map, but not named above in this Table.

CENTRAL AMERICA.

Situation.—Divisions.—Central America occupies the southern extremity of North America and the central part of the Western Continent. It embraces the British colony of Balize, or British Honduras, and five republics:—

Name.	Sq. Miles.	Population.	Capital.
Balize........	13,500	27,452	Balize (large negro population).
Guatemala....	40,777	1,215,310	New Guatemala (largest city in C. A.)
Honduras.....	47,092	351,700	Tegucigalpa (*tay-goo-se-gahl'pah*).
San Salvador..	7,335	482,422	San Salvador (founded in 1528).
Nicaragua.....	58,000	300,000	Managua (*mah-nah'gwah*).
Costa Rica....	21,495	185,000	San José (*sahn ho-say'*).

Surface, etc.—Central America consists mainly of table-land of moderate height, bordered on the Pacific coast by a mountain-range which contains several active volcanoes. Eruptions occur from time to time, and earthquakes are frequent and destructive. The city of San Salvador has repeatedly suffered from violent shocks.

The San Juan River and Lake Nicaragua are the most important navigable waters. It has been proposed to establish communication between the oceans, by means of these waters and a ship-canal from Lake Nicaragua to the Pacific.

General Description.—Valuable cabinet and dye-woods are characteristic of Central America. Monkeys chatter in the forests; alligators throng the rivers and lakes. Corn is the important grain. Sugar-cane flourishes, and coffee is a large and profitable crop. Gold and silver mines are abundant, though little worked; coal and other minerals are not wanting. In some sections sheep are raised, and a coarse cloth is woven from their wool; but, in general, manufactures are neglected.

Foreign Commerce consists principally in the exportation of coffee, indigo, cochineal, India-rubber, and the precious metals; and in the importation of various manufactures. Mahogany, logwood, and sugar, are the staple exports of Balize.

Inhabitants.—History.—Except in Costa Rica and Balize, the greater part of the population consists of Indians and mestizos. The white inhabitants are mostly of Spanish descent. The Roman Catholic religion prevails.

The Spaniards subjugated this region soon after Columbus first visited the coast of Honduras in 1502, and they held it for nearly three hundred years. The five states, on establishing their independence in 1825, formed themselves into a federal republic; but the union was soon broken, and since then their progress has been retarded by frequent revolutions and civil strife.

Interesting remains, consisting of ruined temples, sculptured idols, tablets covered with carved figures, etc., are found in different parts of Central America.—(*See engraving, p. 65.*)

THE WEST INDIES.

Area, 95,929 square miles. Population, 4,381,735.

The West Indies consist of about a thousand islands, extending in a curve from Florida to the South American coast. They have a tropical climate, and embrace the great sugar-producing region of the world.—(For a representation of the sugar-harvest, *see engraving, p. 65.*)

The Bahamas form the northern part of the West Indies. They are low, being of coral formation. One of the chief branches of industry is the sponge-fishery. Sponges are the skeletons of small marine animals; they are brought up from reefs below the surface of the sea, with long poles armed with hooks. Turk's Island yields salt, formed by the evaporation of sea-water collected in lagoons (shallow ponds communicating with the sea).

The Bahamas belong to Great Britain. Many of the inhabitants are descendants of American tories, who sided with the British during the Revolutionary War and after its conclusion withdrew to these islands.

The Great Antilles comprise the large islands of Cuba and Porto Rico (*por'to re'ko*), belonging to Spain; Jamaica, a British colony; and Hayti, the seat of two independent republics of negroes and mixed races. Parts of these islands are mountainous. The soil is extremely fertile, and produces sugar, tobacco, corn, coffee, cotton, indigo, and tropical fruits, in great abundance.

Cuba is nearly as large as the state of Pennsylvania. Sugar and tobacco are its leading productions and exports. Three-fourths of the sugar, and a large part of the famous "Havana" cigars, go to the United States. Molasses, rum, honey, oranges, and pineapples, are also prominent exports. Coffee is extensively cultivated, and two crops of corn are obtained in a year. Dense forests cover most of the island; mahogany and ebony are among the valuable woods.—Cuba is now entitled to representation in the Spanish Cor'tes, or Parliament.

HAVANA, the capital (population 230,000), is the second city of the New World in foreign commerce, and the greatest sugar-market in the world.

Porto Rico and **Hayti** resemble Cuba in soil and productions.

In Cuba, the officials are mainly Spaniards. The planters are of Spanish descent. The labor is performed partly by negroes and partly by coolies brought from China. Provision has been made (1880) for the gradual abolition of slavery in the island within ten years. An insurrection maintained by the Cubans from 1868 to 1878, for the purpose of establishing their independence, proved unsuccessful.

Jamaica, besides its other productions, is noted for its rum, and allspice or pimento. The latter is obtained from "walks", or plantations, on the hills. KINGSTON, the capital, is the mart to which turtles are brought from the neighboring coasts and islands for export. The flesh of the turtle is eaten; its shell is wrought into articles of use and ornament; its oil serves the natives instead of butter, and is burned in lamps.

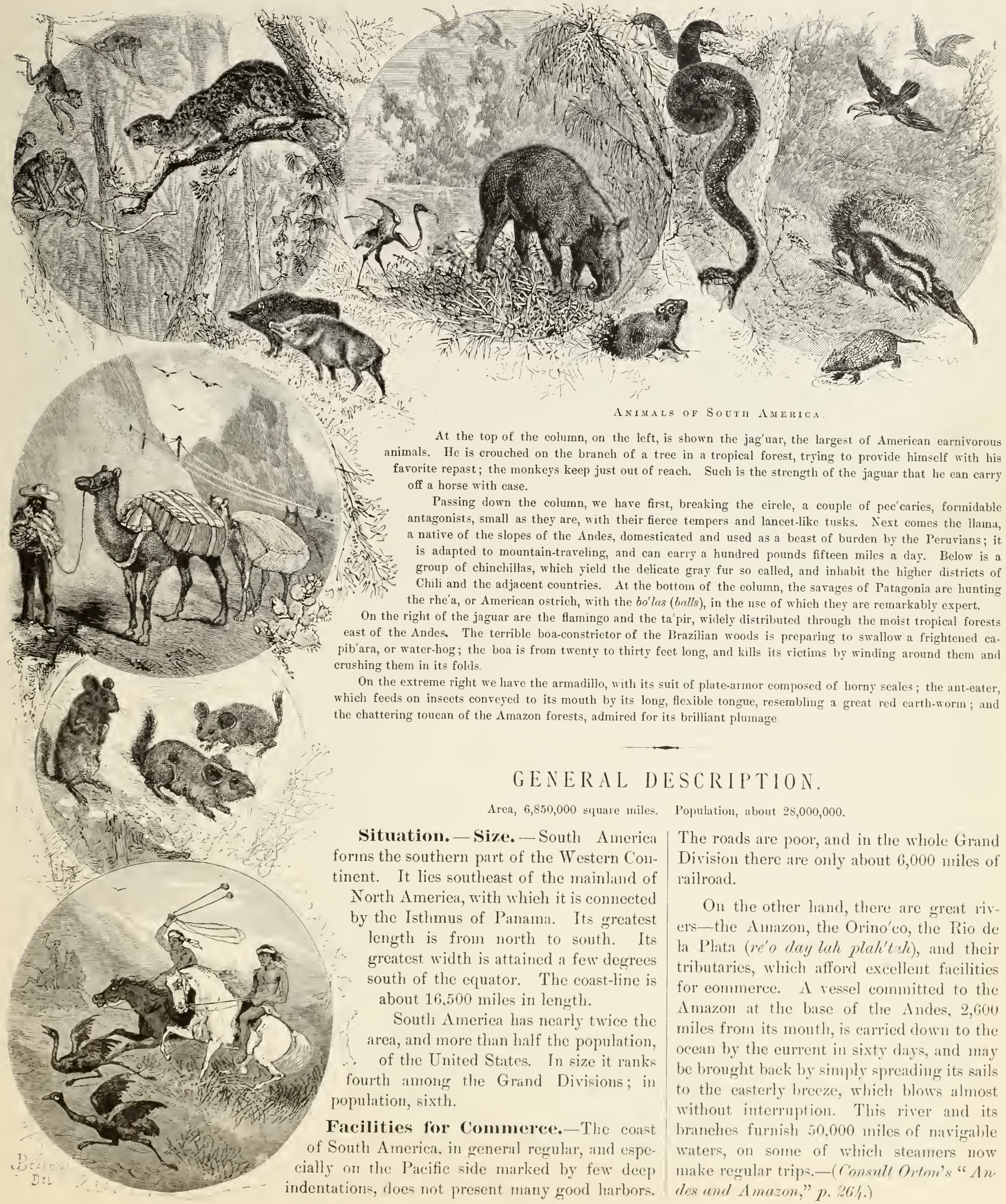
The Lesser Antilles consist of many small islands stretching from Porto Rico to the mouth of the Orinoco River. They belong to different European nations (*see bottom of map, p. 67*).

Questions.—How is Central America situated? Name the colony and republics of which it is composed, and the capital of each. Describe the surface of Central America. Its volcanoes. Name its most important navigable waters. Give a general description of the country. In what does its foreign commerce principally consist? Give an account of the inhabitants. Of their history. What interesting remains are found?

Of what do the West Indies consist? Describe their climate. Give an account of the Bahamas. What are sponges? How are they obtained? What are comprised in the Great Antilles? What do they produce? Give an account of Cuba. Havana. State what you can about the Cubans. Give an account of Jamaica. Of what do the Lesser Antilles consist?

Name the political divisions of North America. Its principal physical divisions. Name its great mountain-range; highest mountain; chief volcano; largest island; most fertile valley; longest river; largest lake; most populous city; leading commercial city.

SOUTH AMERICA.



Animals of South America.

At the top of the column, on the left, is shown the jag'uar, the largest of American carnivorous animals. He is crouched on the branch of a tree in a tropical forest, trying to provide himself with his favorite repast; the monkeys keep just out of reach. Such is the strength of the jaguar that he can carry off a horse with ease.

Passing down the column, we have first, breaking the circle, a couple of pec'caries, formidable antagonists, small as they are, with their fierce tempers and lancet-like tusks. Next comes the llama, a native of the slopes of the Andes, domesticated and used as a beast of burden by the Peruvians; it is adapted to mountain-traveling, and can carry a hundred pounds fifteen miles a day. Below is a group of chinchillas, which yield the delicate gray fur so called, and inhabit the higher districts of Chili and the adjacent countries. At the bottom of the column, the savages of Patagonia are hunting the rhe'a, or American ostrich, with the *bo'las* (*balls*), in the use of which they are remarkably expert.

On the right of the jaguar are the flamingo and the ta'pir, widely distributed through the moist tropical forests east of the Andes. The terrible boa-constrictor of the Brazilian woods is preparing to swallow a frightened capib'ara, or water-hog; the boa is from twenty to thirty feet long, and kills its victims by winding around them and crushing them in its folds.

On the extreme right we have the armadillo, with its suit of plate-armor composed of horny scales; the ant-eater, which feeds on insects conveyed to its mouth by its long, flexible tongue, resembling a great red earth-worm; and the chattering toucan of the Amazon forests, admired for its brilliant plumage.

GENERAL DESCRIPTION.

Area, 6,850,000 square miles. Population, about 28,000,000.

Situation. — Size. — South America forms the southern part of the Western Continent. It lies southeast of the mainland of North America, with which it is connected by the Isthmus of Panama. Its greatest length is from north to south. Its greatest width is attained a few degrees south of the equator. The coast-line is about 16,500 miles in length.

South America has nearly twice the area, and more than half the population, of the United States. In size it ranks fourth among the Grand Divisions; in population, sixth.

Facilities for Commerce.—The coast of South America, in general regular, and especially on the Pacific side marked by few deep indentations, does not present many good harbors. The roads are poor, and in the whole Grand Division there are only about 6,000 miles of railroad.

On the other hand, there are great rivers—the Amazon, the Orino'co, the Rio de la Plata (*re'o day lah plah'tah*), and their tributaries, which afford excellent facilities for commerce. A vessel committed to the Amazon at the base of the Andes, 2,600 miles from its mouth, is carried down to the ocean by the current in sixty days, and may be brought back by simply spreading its sails to the easterly breeze, which blows almost without interruption. This river and its branches furnish 50,000 miles of navigable waters, on some of which steamers now make regular trips.—(*Consult Orton's "Andes and Amazon," p. 264.*)

Political Divisions.—The political divisions of South America are, the Empire of Brazil; the Republics of Venezuela (*ven-e-zwe′lạ*), United States of Colombia, Ecuador (*ek-wah-dor′*), Peru, Bolivia, Chili (*chil′le*), the Ar′gentine Republic, Uruguay (*u-roo-gway′*), and Paraguay (*pah-rah-gway′*); and the Colonies of British, Dutch, and French Guiana (*ghe-ah′nạ*). Patagonia, an extensive region comprising the southern extremity of the Grand Division, belongs partly to Chili, partly to the Argentine Republic.

Brazil is a constitutional monarchy—the only monarchy in South America. The executive head of each of the republics is a President; the law-making power is vested in a Legislature, in most cases composed of two Houses.

Map Questions.—Which is the largest division of South America? The smallest? Which consists of a long, narrow strip? Name the five divisions in the north. Which countries are situated on the Caribbe′an Sea? On the Atlantic Ocean? On the Pacific? Which division has no seacoast? Which is traversed by the greatest number of large rivers? Which is bounded mostly by large rivers? Which is named from the equator? Why?

History.—South America was discovered by Columbus, who landed at the mouth of the Orinoco in 1498. The following year, a party of Spanish explorers visited the northern coast. One of the number, Amerigo Vespucci (*ah-may-re′go ves-poot′she*), having published an account of this voyage in 1500, the whole country was called from him *America*.

It was not known that a great ocean lies west of America till Balbo′a made the discovery, having crossed the Isthmus of Panama in 1513. Seven years later, Magellan entered the Pacific by passing through the strait since called by his name. The vast empire of Peru was conquered by Pizarro; and ultimately the whole of South America was brought under Spanish rule, except Brazil, which was discovered by a Portuguese, and became a dependency of Portugal.

In 1810, the standard of revolt was raised in the Spanish colonies; and within eleven years they all became independent republics. Brazil separated from Portugal in 1822.

Inhabitants.—The population is made up of,

1. Whites, principally descendants of the early Spanish colonists, and, in Brazil, of Portuguese settlers. They are the ruling class, but in most of the states have hardly kept pace with other civilized nations. Political commotions have interfered with their prosperity. They use the Spanish language, except in Brazil, where Portuguese is spoken.
2. Indians, numbering several millions. They are generally inoffensive, but ignorant, indolent, and uncivilized.
3. Negroes, descendants of slaves imported from Africa. In Brazil, they form a large element of the population.
4. Mixed races, derived from the union of those named above. Most of the people belong to this class.

In South America, the Roman Catholic religion prevails.

Questions.—How is South America situated? How long is its coast-line? How does it compare with the United States in area and population? How does it rank among the Grand Divisions? As regards commerce, under what disadvantages does South America labor? What great advantage has it? What is said of navigation on the Amazon and its branches?

Name the political divisions of South America. Describe the government of the republics. What is a republic? What country is a monarchy? What is a monarchy? Why is Brazil called an empire? By whom was South America discovered? Why was the continent called *America*? Who discovered the Pacific? Who first entered it with a fleet, and how? Mention some facts connected with the later history of South America. Of what four classes is the population made up? What religion prevails?

MAP QUESTIONS ON SOUTH AMERICA.

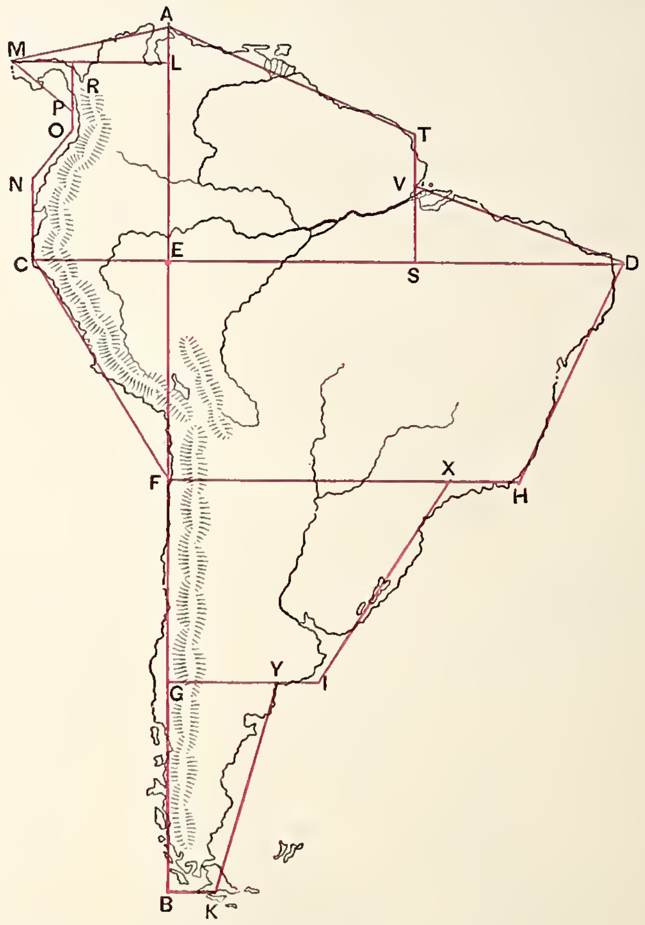
Latitude, etc.—Which divisions of South America are wholly in north latitude? Which, in south? Through which divisions, and what part of them, does the equator pass? The Tropic of Capricorn? In what zones does South America lie? What part of South America is coldest? Why? What part of South America is as far south of the equator as New York is north of it? What part is crossed by the meridian of New York? What capital is nearly due south of Halifax?

Land-Divisions.—Name the most northerly, easterly, westerly, and southerly capes of South America. Name and describe the principal mountain-chain of South America. How is the island of Trinidad situated? To what group does it belong? What island, twice as large as Massachusetts, is at the mouth of the Amazon? Where are the Falkland (*fawk′lạnd*) Islands? Where is Tierra del Fuego (*te-ĕr′rah del fway′go*)? What separates it from the mainland?

Water-Divisions.—Describe the Caribbe′an Sea. Lake Maracaybo (*mah-rah-ki′bo*). Lake Titicaca (*te-te-kah′kah*). What bays indent the Atlantic coast? The Pacific coast? Describe the Amazon River. What is its principal branch? Describe the Madeira (*mạ-de′rạ*) River. Name the chief river of the United States of Colombia. Of Venezuela. Describe the Orinoco. What rivers unite to form the Rio de la Plata?

Miscellaneous.—What natural division of land is South America? What prevents it from being an island? What capital is in about the same longitude as Washington? How does the time at Lima (*le′mah*) differ from that of Washington? Does the sun set at Ri′o Janeiro (*jạ-ne′ro*) before or after it does at Washington? How many minutes? Which division of South America has the fewest towns?

DIRECTIONS FOR DRAWING THE MAP.



Draw the vertical line A B = 4,550 mi.

Take A L = 195 mi., A E = 1,200 mi., E F = 1,160 mi., F G = 1,050 mi.

Draw the horizontal lines L M = 800 mi., E D = 2,400 mi., F H = 1,840 mi., G I = 800 mi., B K = 250 mi., E C = 700 mi.

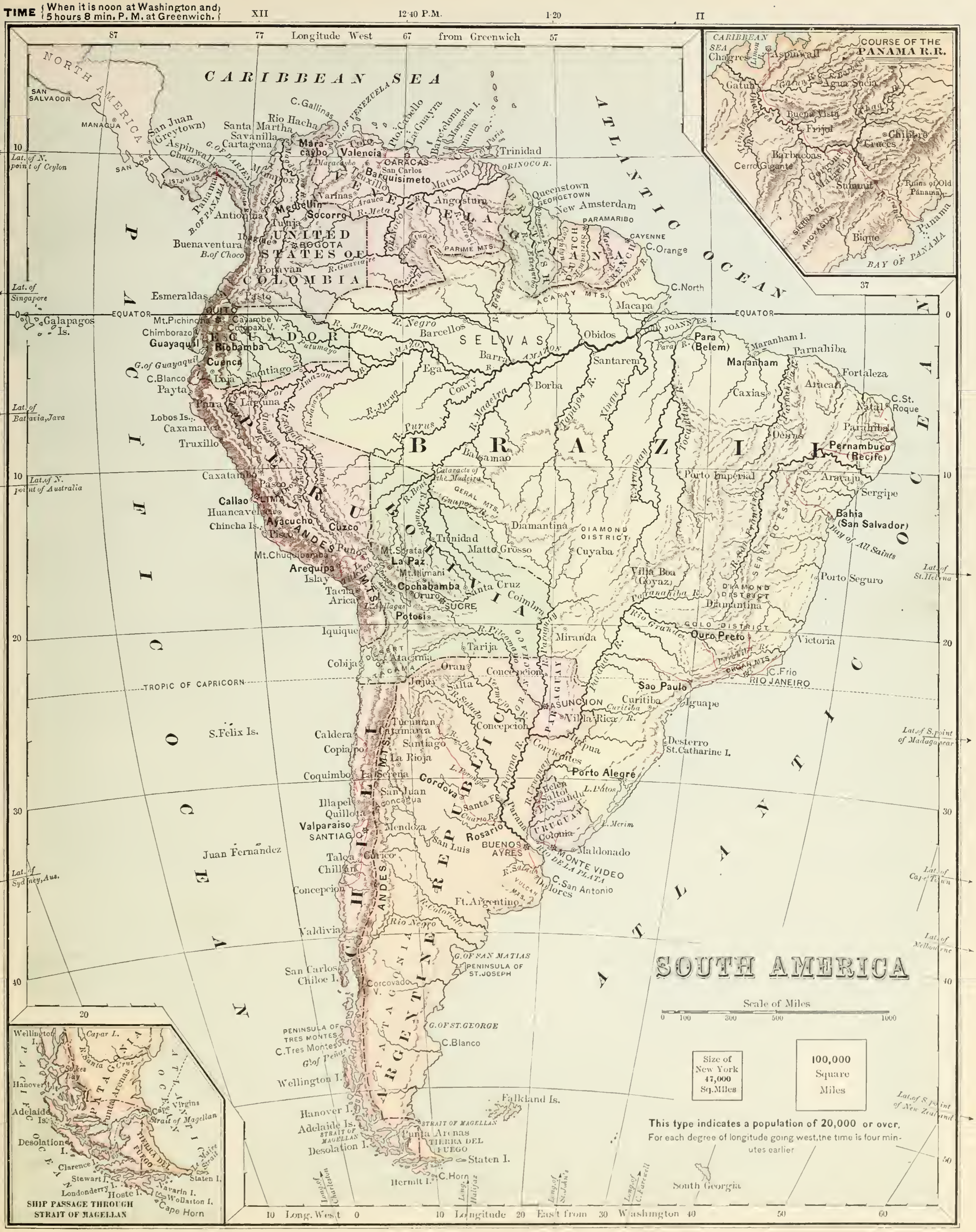
Take L R = 500 mi., E S = 1,300 mi., H X = 375 mi., G Y = 580 mi.

Draw the vertical lines S T = 645 mi., R O = 375 mi., C N = 400 mi.

Take S V = 400 mi., and R P = 160 mi.

Draw A M, A T, V D, D H, X I, Y K, F C, N O, M P.

Sketch the outline. Insert the Andes, the Amazon River, the Orinoco, the Paraguay, the Parana (*pah-rah-nah′*), and the Rio de la Plata. How do the Andes trend, relatively to the coast?

TIME (When it is noon at Washington and 5 hours 8 min. P.M. at Greenwich.)
XII
12·40 P.M.
1·20
II
Longitude West from Greenwich
87
77
67
57
SOUTH AMERICA
Scale of Miles
0 100 300 500 1000
Size of New York 47,000 Sq. Miles
100,000 Square Miles
This type indicates a population of 20,000 or over.
For each degree of longitude going west, the time is four minutes earlier
COURSE OF THE PANAMA R.R.
CARIBBEAN SEA
Chagres
Aspinwall
Gatun
Agua Sucia
Buena Vista
Frijol
Chilibre
Cruces
Barbacoas
Cerro Gigante
Summit
Ruins of Old Panama
Panama
Bique
BAY OF PANAMA
SHIP PASSAGE THROUGH STRAIT OF MAGELLAN
Wellington I.
Capar I.
PATAGONIA
Hanover I.
Adelaide Is.
Desolation I.
Punta Arenas
Cape Virgins
Strait of Magellan
Clarence I.
Stewart I.
Londonderry I.
Hoste I.
Navarin I.
Wollaston I.
Cape Horn
Staten I.
TIERRA DEL FUEGO
CARIBBEAN SEA
ATLANTIC OCEAN
PACIFIC OCEAN
NORTH AMERICA
SAN SALVADOR
MANAGUA
SAN JOSE
San Juan (Greytown)
Aspinwall
Chagres
ISTHMUS
Panama
B. OF PANAMA
G. OF DARIEN
C. Gallinas
Rio Hacha
Santa Martha
Savanilla
Cartagena
Mompox
Antioquia
Medellin
Socorro
Tunja
Ibague
BOGOTA
UNITED STATES OF COLOMBIA
Buenaventura
B. of Choco
Popayan
Pasto
Esmeraldas
Maracaybo
Coro
Valencia
CARACAS
San Carlos
Barquisimeto
Truxillo
Varinas
Maturin
Angostura
Barcelona
Cumana
La Guayra
Pto. Cabello
Trinidad
ORINOCO R.
VENEZUELA
PARIME MTS.
GUIANA
BRITISH
DUTCH
FRENCH
Queenstown
GEORGETOWN
New Amsterdam
PARAMARIBO
CAYENNE
C. Orange
C. North
ACARAY MTS.
Macapa
EQUATOR
Galapagos Is.
QUITO
Mt. Pichincha
Cayambe V.
Cotopaxi V.
Chimborazo V.
Guayaquil
Riobamba
Cuenca
Loja
ECUADOR
G. of Guayaquil
C. Blanco
Payta
Piura
Lobos Is.
Caxamarca
Truxillo
Caxatambo
Pasco
Callao
LIMA
Huancavelica
Ayacucho
Chincha Is.
Pisco
Cuzco
Puno
Mt. Chuquibamba
Arequipa
Islay
Tacna
Arica
PERU
ANDES
R. Japura
R. Negro
Barcellos
SELVAS
AMAZON
Ega
Coary
R. Jurua
R. Purus
R. Madeira
Borba
Barra
Obidos
Santarem
Para (Belem)
Maranham
Maranham I.
Parnahiba
Fortaleza
Aracati
Caxias
C. St. Roque
Natal
Parahiba
Pernambuco (Recife)
Oeiras
Porto Imperial
Aracaju
Sergipe
Bahia (San Salvador)
Bay of All Saints
Porto Seguro
Villa Boa (Goyaz)
DIAMOND DISTRICT
Diamantina
GOLD DISTRICT
Ouro Preto
Victoria
ORGAN MTS.
C. Frio
RIO JANEIRO
Sao Paulo
Iguape
Curitiba
Desterro
St. Catharine I.
Porto Alegre
L. Patos
L. Merim
BRAZIL
Cataracts of the Madeira
GERAL MTS.
Diamantina
Matto Grosso
Cuyaba
Miranda
Balsamao
Trinidad
Mt. Sorata
La Paz
Mt. Illimani
Cochabamba
Oruro
Santa Cruz
Coimbra
Potosi
SUCRE
BOLIVIA
Iquique
Cobija
DESERT OF ATACAMA
Tarija
Oran
Jujuy
Salta
Concepcion
ASUNCION
Villa Rica
PARAGUAY
TROPIC OF CAPRICORN
Tucuman
Catamarca
Santiago
La Rioja
Corrientes
Itapua
Concepcion
Santa Fe
Cordova
San Juan
Aconcagua
Mendoza
San Luis
Rosario
BUENOS AYRES
MONTE VIDEO
Maldonado
RIO DE LA PLATA
Colonia
Paysandu
Salto
Belen
URUGUAY
C. San Antonio
Dolores
VULCAN MTS.
Ft. Argentino
ARGENTINE REPUBLIC
S. Felix Is.
Caldera
Copiapo
Coquimbo
La Serena
Illapel
Quillota
Valparaiso
SANTIAGO
Juan Fernandez
Talca
Curico
Chillan
Concepcion
Valdivia
CHILE
Rio Negro
R. Colorado
G. OF SAN MATIAS
PENINSULA OF ST. JOSEPH
San Carlos
Chiloe I.
Corcovado V.
PATAGONIA
PENINSULA OF TRES MONTES
C. Tres Montes
G. of Peñas
G. OF ST. GEORGE
C. Blanco
Wellington I.
Hanover I.
Adelaide Is.
Desolation I.
STRAIT OF MAGELLAN
Punta Arenas
TIERRA DEL FUEGO
Staten I.
C. Horn
Hermit I.
Falkland Is.
South Georgia
Lat. of N. point of Ceylon
Lat. of Singapore
Lat. of Batavia, Java
Lat. of N. point of Australia
Lat. of Sydney, Aus.
Lat. of St. Helena
Lat. of S. point of Madagascar
Lat. of Cape Town
Lat. of Melbourne
Lat. of S. point of New Zealand
Long. of Charleston
Long. of Halifax
Long. of St. John's
Long. of C. Farewell
10 Long. West 0 10 Longitude 20 East from 30 Washington 40 50 60

PHYSICAL DIVISIONS AND FEATURES.

SURFACE.

High and Low Plains.—(*Refer constantly to the opposite map.*) As regards elevation, South America is composed of four principal divisions: viz., the Plateau of the Andes, extending along the western coast; the Plateau of Guiana, in the north; the Plateau of Brazil, in the east; and the Central Plains, distinguished as Llanos in the north, Selvas on the borders of the Amazon, and Pampas in the south.

Map Questions.—Between what waters on the north and south does the Plateau of the Andes extend? In what part is it widest? Through what countries (*compare with map, p. 71*) does it extend? By what plains is the Plateau of Guiana separated from the Plateau of the Andes? From the Plateau of Brazil. In what country are the Selvas of the Amazon mostly included? What rivers traverse the Pampas? What part of Brazil is lowest? What part of the Argentine Republic is highest?

Mountains.—The great mountain-system of South America is that of the Andes, the longest in the world, and with the exception of the Himalayas, in Asia, the highest.

The Andes consist of parallel ranges, inclosing elevated valleys and containing numerous volcanoes. Like the Rocky Mountains (of which they may be regarded as a continuation), they are rich in mineral wealth. Their eastern slopes give rise to large rivers tributary to the Atlantic.

From the Plateau of Guiana rise the Parime (*pah-re'may*) Mountains, attaining an extreme height of about 10,000 feet; the Sierra Acaray (*ah-kah-ri'*), a lower range, lies on the boundary between Guiana and Brazil. Near the coast of Brazil is the Serra do Espinhaço (*es-peen-yah'so*), with its celebrated diamond-mines.

Most authorities represent Mount Aconcagua (*ah-kon-kah'gwah*—22,422 feet), in Chili, as the loftiest peak of the Andes and of America; but recent surveys assign to peaks of the Bolivian Andes a somewhat greater height.

The most noted volcanoes are Chimborazo (*chim-bo-rah'zo*) and Cotopaxi (*ko-to-pax'e*), both crowned with perpetual snow. Along the whole western coast, earthquakes are common. The passes of the Andes are steep and dangerous; some of them, nearly three miles above sea-level, can be traveled only by mules and llamas.—Associated with the Andes is the condor, the largest known bird of prey, which soars above the tops of the highest peaks.

Describe the situation of all the mountains and peaks named.

Central Plains.—The Llanos of the Orinoco, and the Pampas of the La Plata and Paraguay, are destitute of trees. The former are very hot. In the dry season they become parched, and all vegetation is destroyed; but no sooner do the rains set in than the whole country is covered with luxuriant grass, which attracts multitudes of wild cattle and horses. The pampas are cooler, produce a coarser grass, and are interspersed with desert patches; but they too support wild cattle and horses without number.

The Selvas of the Amazon, in consequence of the rich soil, abundant moisture, and tropical heat, are covered with an almost impenetrable growth of magnificent trees, climbing-plants, and dense underbrush. Beasts, birds, insects, and uncivilized native tribes, are the sole inhabitants.

RIVERS.—LAKES.

Rivers.—All the important rivers of South America belong to the Atlantic system.

There is a remarkable connection between the basins of the three great rivers. The upper Orinoco is connected by a navigable stream with the Rio Negro (*re'o nay'gro*), the largest northern tributary of the Amazon. Between one of the branches of the Madeira (also a tributary of the Amazon) and the Paraguay, the watershed is quite insignificant; so that the intervening tract is converted into a lake during the rainy season, and there is a continuous water-passage through the Central Plains from the mouth of the Orinoco to that of the La Plata.

Lakes.—South America has few lakes. Lake Maracaybo, the largest, communicates with the Caribbean Sea. Titicaca, next in size, is the highest large lake in the world, having an elevation of about two and a half miles.

Map Questions.—Describe the most important northern branch of the Amazon. How wide is the Amazon at its mouth (*use the scale*)? With what is the Para (*pah-rah'*) River connected? Is it north or south of the equator? Describe the Tocantins (*to-kahn-teens'*) River. Name the largest river in eastern Brazil. Describe the Parana River. The Paraguay River.

What part of the South American coast is washed by the Equatorial Current? What is the direction of this current? Is a vessel from New York, bound for Buenos Ayres, aided or retarded by the Brazilian Current? Would a vessel from the Pacific, rounding Cape Horn, be assisted or retarded by the current? Describe the Peruvian Current. The Mexican Coast Current.

CLIMATE.—VEGETATION.

Temperature.—The lowlands of South America that lie in the Torrid Zone, are hot; the easterly trade-winds, laden with moisture from the Atlantic and the numerous watercourses, supply abundant rain: a damp and unhealthy climate is the result.

On the great western plateau, the heat diminishes as the elevation increases, and there are heights at which the climate is healthy and delightful; hence the many towns located in high valleys of the Andes.

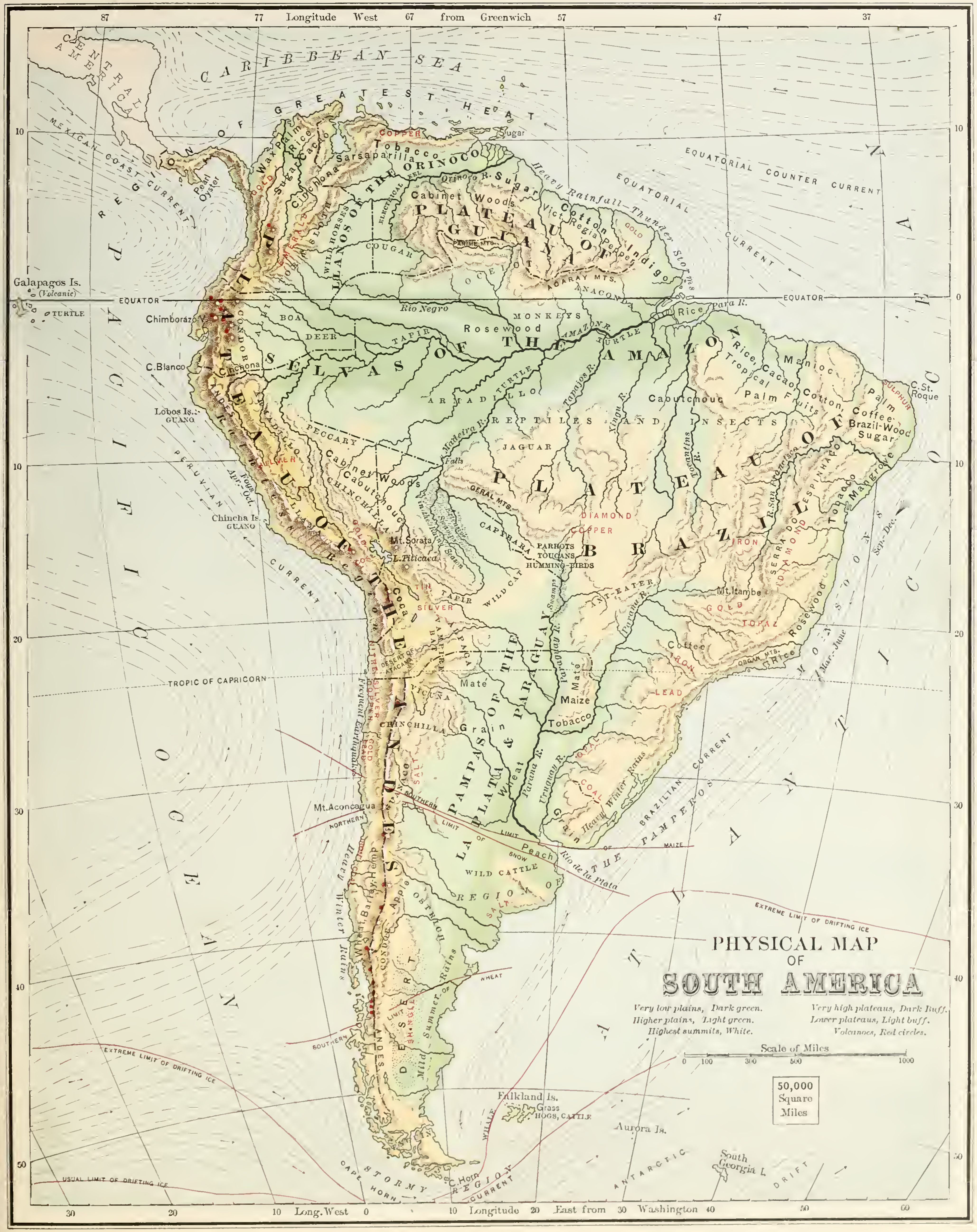
South of the Tropic of Capricorn, the climate is that of the Temperate Zone; while the southern extremity, exposed to the effects of drifting ice, Antarctic currents, and chilling west winds from the mountains, is cold and dreary.

Rainfall.—The middle part of the Pacific Slope is rainless (*see map*), because the moisture of the prevailing easterly winds is condensed and precipitated on the eastern slopes of the Andes. In the south the case is reversed; westerly winds prevail, the rain fall on the west side of the mountains is heavy, and on the east side, the winds having been deprived of their moisture, desert regions occur.

Map Questions.—Describe the rainfall on the coast of Guiana. On different parts of the Pacific coast. Where do fogs occur? Across what part of South America does the line denoting the southern limit of maize extend? How far north on the Central Plains does snow fall? Can wheat be raised farther from the equator, in North or in South America? How far north in the Atlantic does ice sometimes drift? What is its usual limit?

What minerals are found in different parts of the Andes? In what countries are copper regions? In what country is the emerald found? The opal? The topaz? The diamond? What are the four minerals last named? In what countries are coal-fields? What rivers are noted for their turtles? What birds abound in Brazil? Where is the American ostrich found? The vicuña (*ve-koon'yah*), valuable for its wool?

Monkeys are eaten by the native tribes; in what regions do they abound? Where is the alpaca found? Where are extensive swamps in the rainy seasons? In what country is the Desert of Atacama (*ah-tah-kah'mah*)? Where else is a desert region? What are the principal vegetable productions in the north of this Grand Division? In eastern Brazil? Where is rice largely raised? Wheat? Where especially does the apple flourish? The peach? The tree which yields caoutchouc (*koo'chook*), or India-rubber?



PHYSICAL MAP OF SOUTH AMERICA

Very low plains, Dark green.
Higher plains, Light green.
Highest summits, White.
Very high plateaus, Dark Buff.
Lower plateaus, Light buff.
Volcanoes, Red circles.

Vegetable Products.—Both the natural and the cultivated products vary greatly according to the latitude and elevation. The different belts of vegetation at different heights near the equator are illustrated on page 13.

In South America we have the great coffee and cocoa producing regions of the world. The various staples of the Torrid and Temperate Zones are raised. There are, besides, tree-ferns, different varieties of palm, the India-rubber tree, cinchona (*sin-ko'nạ*) trees, from the bark of which qui'nine is prepared, etc.

Questions.—Name the principal physical divisions of South America. What is the great mountain-system? Of what do the Andes consist? State what you can about the Andes; their highest peaks; their most noted volcanoes; their passes; the condor. Describe the Llanos of the Orinoco. The Selvas of the Amazon. The Pampas.

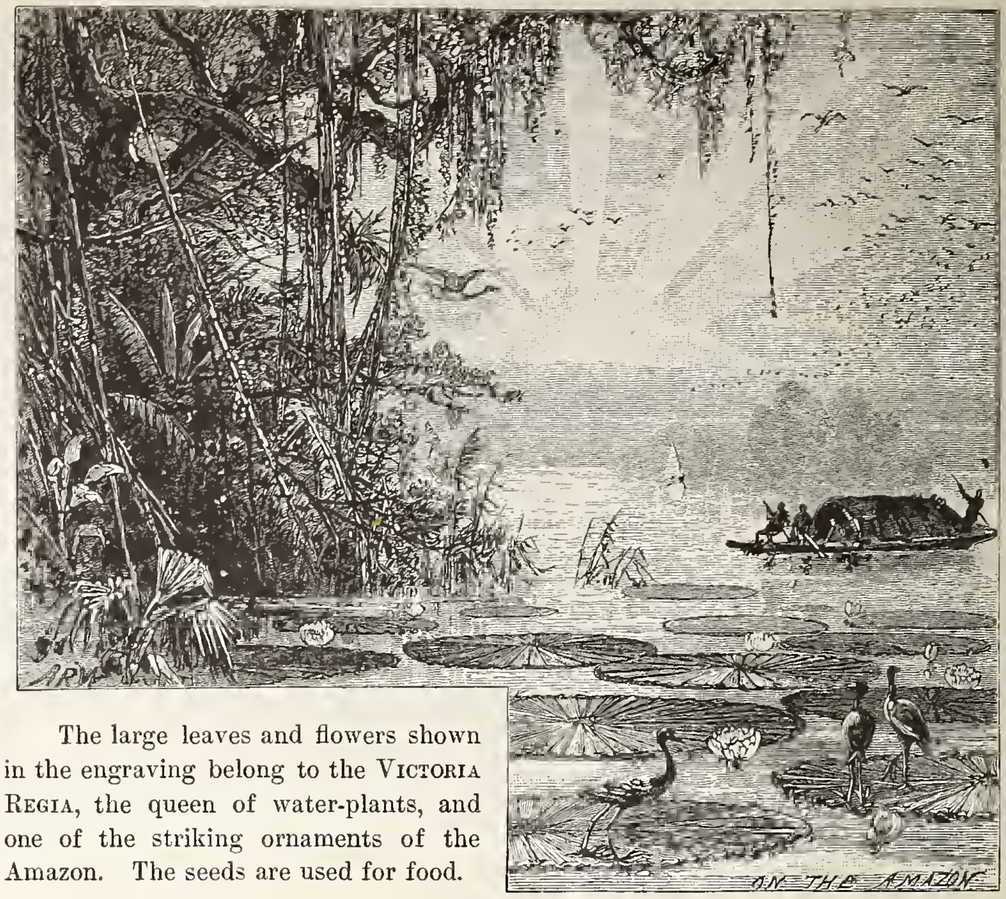
Into what do all the most important rivers of South America flow? Name the three chief rivers. How are their basins connected? Name and describe the two principal lakes. Give an account of the climate in the tropical lowlands. On the great western plateau. South of the Tropic of Capricorn. Where are rainless regions, and to what is the want of rain owing? According to what do the vegetable products vary? What does South America specially produce? What staples are raised? Mention some of the characteristic trees.

THE EMPIRE OF BRAZIL.

General Description.—Brazil, first of the countries of South America in size and importance, is larger than the United States exclusive of Alaska. It has vast resources—a fertile soil that yields coffee, sugar-cane, tobacco, rice, maize, etc., in great abundance—immense pastures, covered with cattle and horses—streams that reach the heart of the selvas teeming with valuable forest-products—and stores of mineral wealth, including gold, iron, copper, coal, and diamonds.

Considerable progress has been made in the construction of railroads; 1,900 miles are already in operation.—In 1871, there were nearly a million and a half of negro slaves in the empire; but, by law, every child of slave-parents born since that date is free.

Agriculture is the leading pursuit, and coffee is the staple product. Brazil yields more than half of the coffee consumed in the world, and the United States takes more than half the quantity exported. Sugar, also, is raised for export. Cacao-plantations are numerous on the lower Amazon. Maize is produced to some extent, but the wheat-flour used in Brazil is imported principally from the United States. The chief dependence of the people, however, is ma'nioc-flour, the making of which is one of the leading branches of manufacture. The banana, pineapple, mango, and other fruits, abound.


ON THE AMAZON.

The large leaves and flowers shown in the engraving belong to the Victoria Regia, the queen of water-plants, and one of the striking ornaments of the Amazon. The seeds are used for food.

Coffee-Plantation in Brazil.

A coffee-plantation is represented in the preceding column. The bushes are partially protected from the tropical sun by palms and other trees. There are two, and sometimes three, coffee-harvests in a year. The berries, gathered by hand, or shaken from the bushes on sheets spread beneath, are gradually dried, and the seeds are then separated from the shells.

The manioc is a shrub with large roots. These are scraped to a pulp, which is prepared for use by being pressed, baked on a hot iron plate, and dried in the sun. When well washed with cold water and dried, it becomes the tapio'ca of commerce.

Forest-Products.—The forests yield rosewood, mahogany, cocoanuts, and wax from a variety of the palm; also, Brazil-nuts, Brazil-wood used in dyeing to produce red and purple tints, and the rare tortoise-shell wood pronounced the most beautiful cabinet-wood in the world. One of the most valuable products is caoutchouc, obtained by making incisions in the India-rubber tree. The milky juice which oozes out is hardened in the sun or over a fire.

Cities.—Rio Janeiro, the capital (population, 274,972), has a noble harbor, and is the largest city of South America; it is the great mart for coffee, besides which it exports tobacco, hides, diamonds, etc. Bahia (*bah-e'ah*), the second city in size, and Pernambuco (*pĕr-nahm-boo'ko*), the third, are actively engaged in commerce. Para, at the gate of the great river-system, is the principal shipping-point for India-rubber, cocoa (the product of the cacao), rice, and cocoanuts.

Consult Marcoy's "Travels in South America," vol. ii., p. 332.

Map Questions.—Bound Brazil. In what part are the important cities? What mountains and cape are near Rio Janeiro? Near what mountains is the eastern diamond district? Where are the Geral (*zhay-rahl'*) Mountains? Where is the gold district? Which is farther east, Rio Janeiro or Washington? When it is noon at Washington, what is the time at Rio Janeiro?

THE SOUTH AMERICAN REPUBLICS.

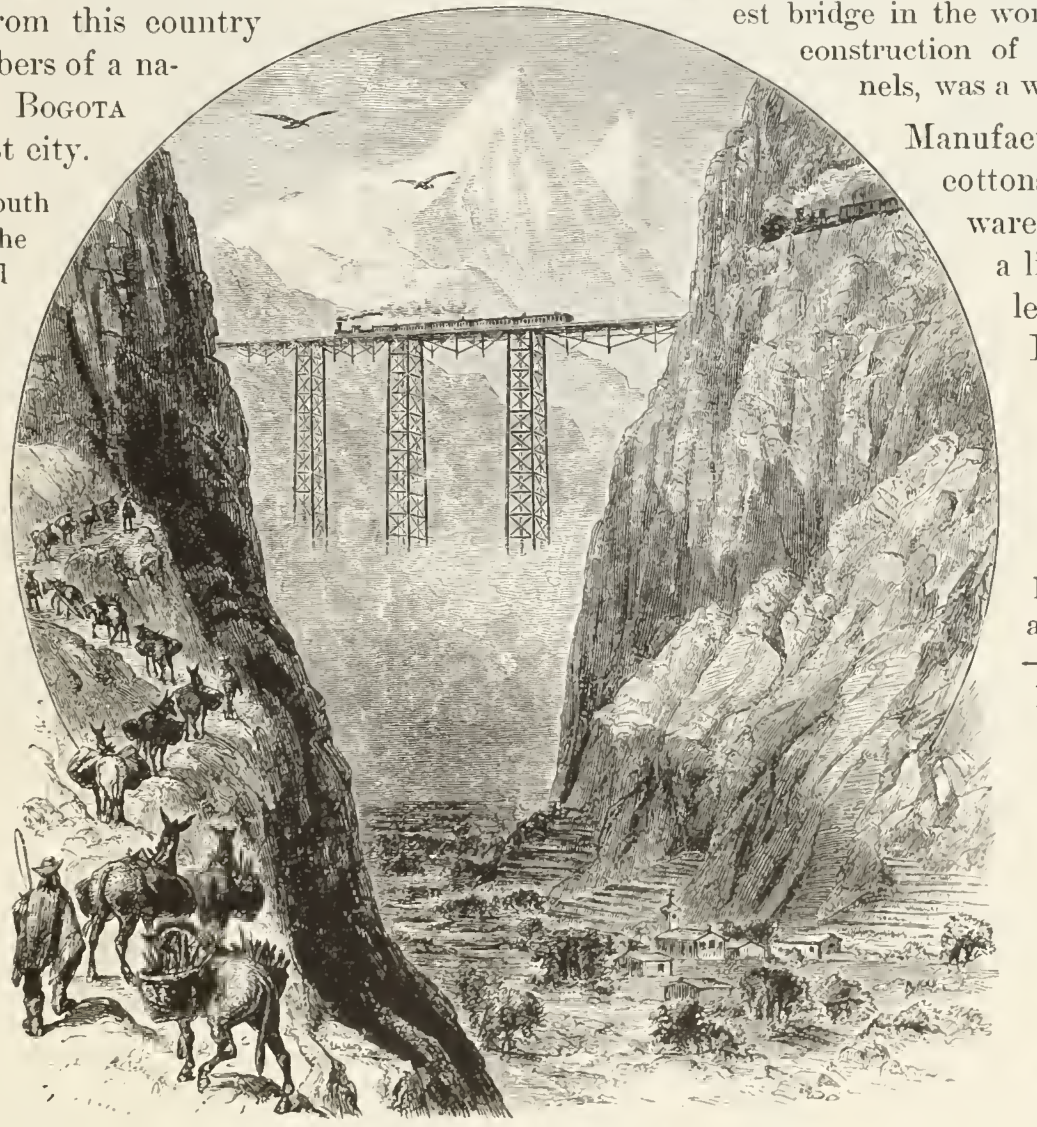
The United States of Colombia occupies the northwestern extremity of South America. This republic is of special importance, because it embraces the Isthmus of Panama. A railroad, connecting Atlantic with Pacific steamers, now crosses the Isthmus: but a ship-canal from ocean to ocean is projected, which, if built, will make great changes in the commerce of the world.

The principal means of communication between the interior and the sea is the Magdale'na River, which is navigated by steamers. The lowlands yield the usual tropical products. The precious metals, emeralds, platinum, salt, and coal, are the most valuable minerals. Gold and silver, Peruvian bark (from the cinchona-tree), coffee, hides, and tobacco, are the main exports. The "Panama" hats, obtained from this country and Ecuador, are made from the fibers of a native tree resembling the palm. Bogota (*bo-go-tah'*) is the capital and largest city.

Map Questions. — How many South American republics are there? Name the three most northerly. Bound the United States of Colombia. What two ports does the Panama Railroad connect? What will be gained, if a ship-canal is built across the Isthmus? Bound Venezuela. Name its chief rivers—lake—gulf. How is the Orinoco River connected with the Negro? Bound Ecuador. What noted volcanoes are in Ecuador? Describe the situation of the Gulf of Guayaquil (*gwi-ah-keel'*).

Venezuela is a country rich in tropical products, the most valuable trees, and mineral wealth as yet undeveloped. Coffee is the chief object of cultivation. Cattle-raising is the favorite pursuit; vast herds find pasturage on the llanos, and furnish hides and tallow for exportation.

Caracas (*kah-rah'kahs*), the capital, is situated ten miles from its port, La Guayra (*lah gwi'rah*).



Pack-Mule Train and Railroad Travel in Peru.

In Lake Maracaybo and on the Orinoco may occasionally be seen Indian villages built over the water on piles. One of these, met with by the early Spanish explorers, so reminded them of the mode of building in the city of Venice, that they called the village Venezuela, *little Venice*, a name since extended to the whole country.

Ecuador.—Of this republic, cocoa is the staple product; besides which, India-rubber, Peruvian bark, and vegetable-ivory, are among the leading exports. Wheat is raised in its perfection 10,000 feet above the level of the sea, and potatoes flourish at a still greater height. Roads are almost unknown.

Quito, "the city above the clouds" (elevation 9,543 feet), is the capital. Guayaquil is the principal port.

The vegetable-ivory nut is the product of a species of palm. As the nut ripens, the contents of the outer shell harden into a white kernel resembling ivory, which is easily carved, and is largely used for making buttons.—A strange practice among some of the Indians and half-breeds, is the eating of clay, which becomes a passion with them, and often proves fatal.—(On cocoa, *consult Johnston's "Chemistry of Common Life," p. 163.*)

Peru has hitherto been important mainly for the fertilizers, guano and nitrate of soda, with which it has supplied European countries and the United States; but these articles are now exported less largely, and the cultivation of sugar is increasing. The alpaca is raised for its wool; the llama, as a beast of burden.

Valuable minerals abound, but little mining is done except for silver and quicksilver. The want of roads has been a great obstacle, but recently several railroads have gone into operation; by one of these, when completed, the coast will be connected with steamers on the Amazon, so that travelers can cross the continent in a week.

This great railroad (*find it on the map*), running east from Callao (*kahl-lah'o*), the principal Peruvian port, crosses the summit of the Andes through a tunnel, at an elevation above sea-level of nearly three miles. It passes over a deep mountain-gorge on the highest bridge in the world, shown in the engraving. The construction of this road, with its numerous tunnels, was a work of unparalleled difficulty.

Manufactures generally are imported; but cottons, woolens, leather goods, ironware, pottery, paper, etc., are made to a limited extent. Education is neglected, though Lima, the capital of Peru, contains the oldest university in America.

Lima, which is seven miles from the coast, carries on considerable commerce through its port Callao, particularly with Great Britain. The houses are built of sun-dried bricks, and are mostly but one story high.—Peru was subjugated in 1533, by Pizarro and a small army of Spaniards. It was then a mighty empire, 2,500 miles in length, inhabited by a partly-civilized people. They were sun-worshipers, and the temple of the Sun, at Cuzco (*koos'ko*), was the most splendid structure in the New World.—(*Consult Prescott's "Conquest of Peru," vol. i., p. 15.*)

Map Questions. — Bound Peru. What is the upper part of the Amazon called? *The Marañon (mah-rahn-yōn')*. Describe the situation of Arequipa (*ah-ray-ke'pah*), the center of a gold and silver district. With what lake is Arequipa connected by railroad? Where are the Lobos (*lo'boce*) Islands, noted for their guano? Bound Bolivia. What river-system drains the northern part of Bolivia? The southern part?

Bolivia was named in honor of Bolivar, "the Liberator of South America," to whom it owes its independence.

The silver-mines of Potosi (*po-to-se'*) have been among the most profitable in the world, and silver is still a leading export of the republic. The productive districts, separated from the coast by a desert, are difficult of access, and commerce has consequently been limited; but a railroad (already begun) around the rapids of the Madeira will provide the country with an outlet by way of the Amazon, and will greatly develop its resources.

Sucre (*soo'kray*) is the capital; La Paz is the largest city.

Questions.—Give a general account of Brazil—its resources—agricultural products—coffee-plantations—manioc—forest-products—caoutchouc—cities. What makes Colombia important? What enterprise is in contemplation? Mention the minerals and exports of Colombia. From what are Panama hats made? Give an account of Venezuela. What was the origin of the name? State what you know about Ecuador.

For what has Peru hitherto been mainly important? What change is noted? For what are the alpaca and the llama raised? What is said of minerals and mining? What has been a great obstacle to the development of the country? Tell what you can about the railroad over the Andes. What is said of manufactures? Describe the capital of Peru. Give some facts of early Peruvian history. In whose honor was Bolivia named? Give an account of Bolivia.

Chili has a coast-line of about 2,500 miles. Hardly one-sixth of the country is adapted to tillage, yet there is a large wheat-crop, two-thirds of which is generally exported. Minerals are abundant, and mining and manufacturing are both on the increase. Copper, silver, wheat, hides, and wool, constitute the principal exports. Great Britain has the largest share of the foreign commerce.

The Chilians are the most progressive people of South America. The Government supports schools in the larger towns, and a flourishing university at the capital. The population includes many Germans, English, and other foreigners.

Santiago (*sahn-te-ah'go*), the capital, is the largest city west of the Andes. Valparaiso (*vahl-pah-ri'so*) is, next to San Francisco, the leading port on the Pacific coast of America.

Map Questions.—Bound Chili. In what zone is it? Does the sun rise at Santiago before or after it rises at Washington? Where is the island of Chiloe (*cheel-o-ay'*), noted for its heavy rainfall? Describe the ship-passage through the Strait of Magellan. Where is the convict-settlement of Punta Arenas (*poon'tah ah-ray'nahs*), belonging to Chili?

Bound the Argentine Republic. What is its chief railroad center? Where is the Gran Chaco (*grahn chah'ko—great hunting-ground*)? Describe the Pilcomayo (*pil-ko-mi'o*) River. Where is Patagonia? Bound Paraguay. In what direction is Uruguay from Paraguay? Bound Uruguay. What two capitals are on the Rio de la Plata?

The Argentine Republic, a progressive state, receives more emigrants from Europe than all the rest of South America. Twelve lines of steamers connect it with European ports. Agricultural interests are improving. Education is fostered by the Government.

The great industry is the raising of cattle and sheep; in proportion to its population, the Argentine Republic contains more of these than any other country in the world. The commerce consists chiefly in the exportation of wool, hides, tallow, sheep-skins, live cattle, and jerked beef (beef dried in the sun); and in the importation of woven fabrics, iron-ware, and other manufactures.

Buenos Ayres, a large commercial city, is the capital. Cor'dova and Rosario (*ro-sah're-o*) are important centers of trade.

The pampas are inhabited by rude half-breeds called Gauchos (*gou'choce*), who employ themselves in catching wild horses, and in lassoing and slaughtering cattle.—A violent southwest wind known as the pampe'ro sweeps clouds of dust over the pampas in the dry season.

Patagonia, the greater portion of which is included in the Argentine Republic, is sparsely inhabited by Indians. The part west of the Andes, together with the western half of Tierra del Fuego and the islands to the south and west, belongs to Chili.

Uruguay consists mostly of luxuriant pastures. Herds of horses and cattle are the chief source of wealth to the inhabitants, and furnish the principal exports—hides, hair, jerked beef, and tallow. Montevideo is the capital and center of foreign commerce.

Paraguay, the inland republic, has suffered from war and unwise government. Its most important product and export is maté (*mah'tay*), or Paraguay tea.—(*Consult Simmond's "Tropical Agriculture," p. 124.*)

Asuncion (*ah-soon-se-ōn'*) is the capital and largest town.

GUIANA is a fertile country, with a hot and moist climate. It contains the most valuable woods, and is rich in tropical products, particularly sugar, rice, cotton, and coffee. Negroes constitute the greater part of the population.

British Guiana is a colony of Great Britain, with which country its commerce is mainly carried on. Georgetown is the capital.

Dutch Guiana, sometimes called Surinam' from its principal river, is a colony of Holland. Paramar'ibo is the capital.

French Guiana is a colony of France, which uses it as a place of banishment for offenders. Cayenne pepper and other spices are produced. Gold has lately been found. Cayenne (*ki-en'*) is the capital.

The milk-tree, the sap of which when freshly taken from incisions in the trunk resembles milk, is a native of Guiana.

Electric eels are found in the rivers. To capture them, the Indians drive into the water a herd of horses, which are immediately attacked by the eels with tremendous shocks and sometimes drowned in the encounter; but the fish thus exhaust their powers, and are then easily taken.

Guiana is remarkable for its phosphorescent insects; the lantern-fly is so brilliant that a person can read by the light it emits.

South American Islands.—Tierra del Fuego (*land of fire*) was so called by its discoverer, Magellan, from the fires he saw on the coast during the night. It is a region of continual storms, and the natives, called Fue'gians, are degraded savages. To avoid the tempests of Cape Horn, steamers generally pass through the Strait of Magellan.

The Falkland Islands, which belong to Great Britain, afford good pasturage; cattle, horses, sheep, and swine, are raised.

Ju'an Fernan'dez belongs to Chili, and is the seat of a German colony. It was the solitary residence of Alexander Selkirk, whose adventures suggested the story of "Robinson Crusoe".

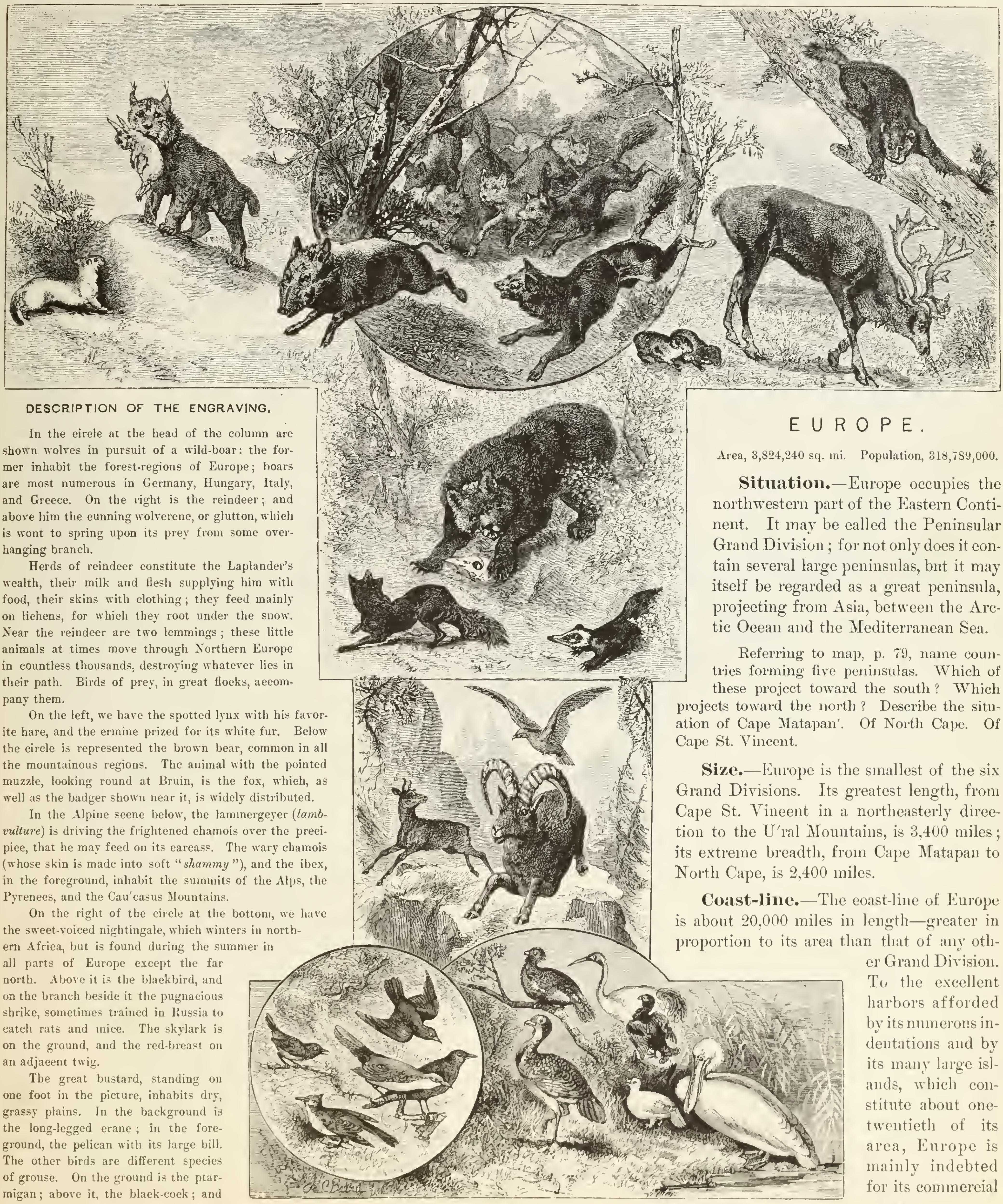
THE SOUTH AMERICAN STATES.

Name.	Area in square mi.	Population.	Capital and largest City.	Miles of Railroad.
Brazil........	3,219,130	10,108,291	Rio Janeiro (274,972).....	1,900
U. S. Colombia	320,750	3,000,000	Bogota (40,883)..........	75
Venezuela.....	401,930	1,784,194	Caracas (48,897).........	70
Ecuador......	248,390	1,150,000	Quito (80,000)...........	26
Peru.........	503,380	3,050,000	Lima (101,488)..........	1,550
Bolivia.......	500,900	2,325,000	Sucre (*cap.*, 23,979), La Paz	31
Chili........	155,000	2,155,029	Santiago (150,367).......	1,050
Argentine Rep.	1,103,316	2,500,000	Buenos Ayres (248,710)...	1,550
Uruguay......	72,170	440,000	Montevideo (73,353).....	233
Paraguay.....	92,000	293,844	Asuncion (20,000)........	45
British Guiana.	85,000	252,000	Georgetown (36,562).....	21
Dutch Guiana.	46,070	69,329	Paramaribo (22,000)......	.....
French Guiana.	27,560	27,082	Cayenne (10,000).........	.....

Questions.—Give an account of Chili; its cities. Describe the Argentine Republic. What is its leading industry? In what does its commerce consist? Name the chief commercial cities. Describe the pampas. The southern extremity of the continent. Uruguay. Paraguay. Give an account of the colonies of Guiana. The milk-tree. The electric eel. Tierra del Fuego. The Falkland Islands. Juan Fernandez.

Name the political divisions of South America and their capitals. Which capitals are also the largest cities in their respective countries? Name the physical divisions of South America; its great mountain-range; most noted volcanoes; three chief rivers; largest lake; highest large lake; most populous city; chief port on the Pacific. Sailing round South America, along what countries in succession would you coast? On the western coast, why are the large cities back from the ocean?

EUROPE.



Animals of Europe.

DESCRIPTION OF THE ENGRAVING.

In the circle at the head of the column are shown wolves in pursuit of a wild-boar: the former inhabit the forest-regions of Europe; boars are most numerous in Germany, Hungary, Italy, and Greece. On the right is the reindeer; and above him the cunning wolverene, or glutton, which is wont to spring upon its prey from some overhanging branch.

Herds of reindeer constitute the Laplander's wealth, their milk and flesh supplying him with food, their skins with clothing; they feed mainly on lichens, for which they root under the snow. Near the reindeer are two lemmings; these little animals at times move through Northern Europe in countless thousands, destroying whatever lies in their path. Birds of prey, in great flocks, accompany them.

On the left, we have the spotted lynx with his favorite hare, and the ermine prized for its white fur. Below the circle is represented the brown bear, common in all the mountainous regions. The animal with the pointed muzzle, looking round at Bruin, is the fox, which, as well as the badger shown near it, is widely distributed.

In the Alpine scene below, the lammergeyer (*lamb-vulture*) is driving the frightened chamois over the precipice, that he may feed on its carcass. The wary chamois (whose skin is made into soft "*shammy*"), and the ibex, in the foreground, inhabit the summits of the Alps, the Pyrenees, and the Cau'casus Mountains.

On the right of the circle at the bottom, we have the sweet-voiced nightingale, which winters in northern Africa, but is found during the summer in all parts of Europe except the far north. Above it is the blackbird, and on the branch beside it the pugnacious shrike, sometimes trained in Russia to catch rats and mice. The skylark is on the ground, and the red-breast on an adjacent twig.

The great bustard, standing on one foot in the picture, inhabits dry, grassy plains. In the background is the long-legged crane; in the foreground, the pelican with its large bill. The other birds are different species of grouse. On the ground is the ptarmigan; above it, the black-cock; and perched on a branch, the capercailzie.

EUROPE.

Area, 3,824,240 sq. mi. Population, 318,789,000.

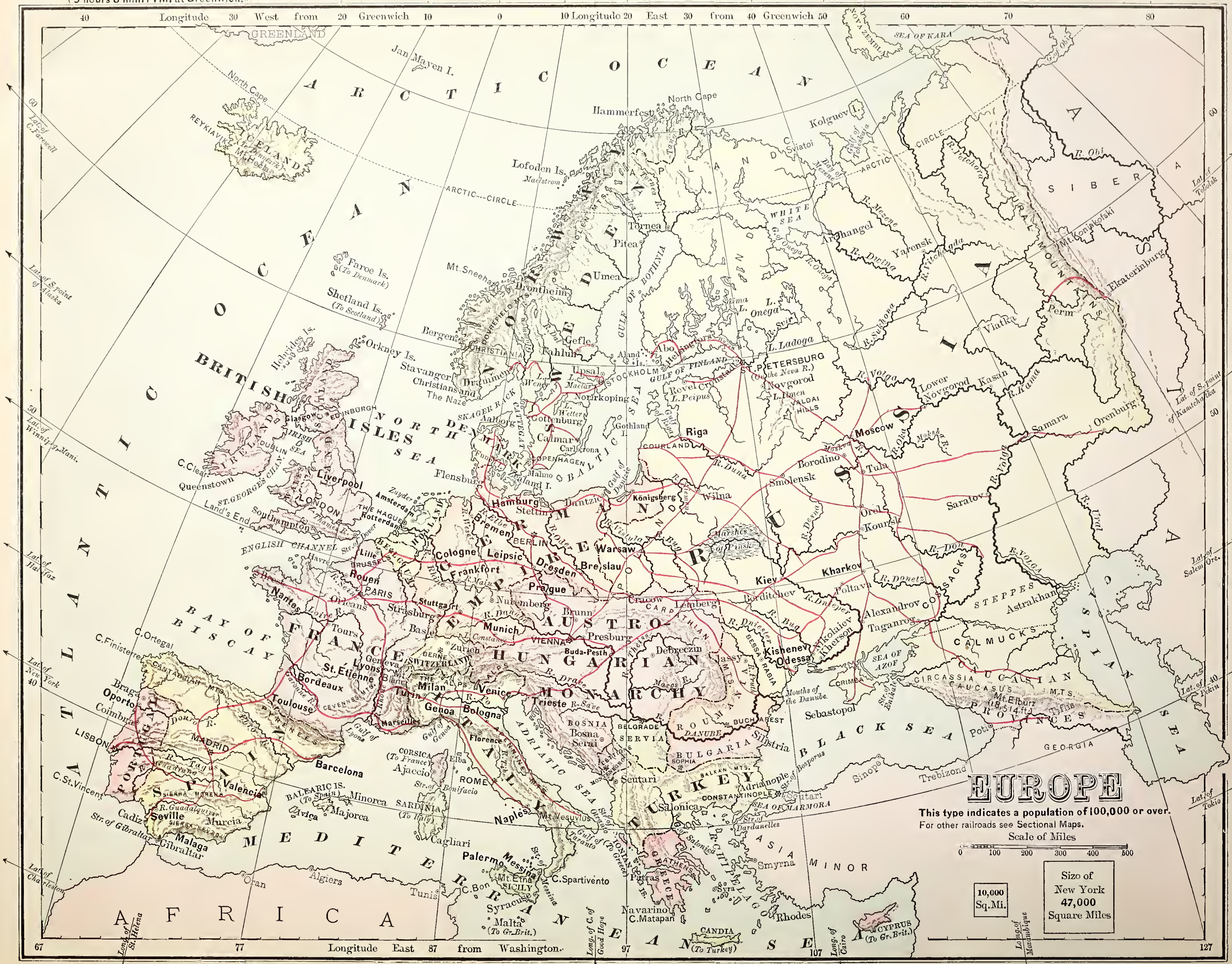
Situation.—Europe occupies the northwestern part of the Eastern Continent. It may be called the Peninsular Grand Division; for not only does it contain several large peninsulas, but it may itself be regarded as a great peninsula, projecting from Asia, between the Arctic Ocean and the Mediterranean Sea.

Referring to map, p. 79, name countries forming five peninsulas. Which of these project toward the south? Which projects toward the north? Describe the situation of Cape Matapan'. Of North Cape. Of Cape St. Vincent.

Size.—Europe is the smallest of the six Grand Divisions. Its greatest length, from Cape St. Vincent in a northeasterly direction to the U'ral Mountains, is 3,400 miles; its extreme breadth, from Cape Matapan to North Cape, is 2,400 miles.

Coast-line.—The coast-line of Europe is about 20,000 miles in length—greater in proportion to its area than that of any other Grand Division. To the excellent harbors afforded by its numerous indentations and by its many large islands, which constitute about one-twentieth of its area, Europe is mainly indebted for its commercial supremacy.

TIME { When it is noon at Washington, and 5 hours 8 min. P. M. at Greenwich.



EUROPE

This type indicates a population of 100,000 or over.

For other railroads see Sectional Maps.

Scale of Miles

Political Divisions.—Europe is composed of ten kingdoms, four empires, three principalities, and two republics—as follows:—

Gr. Britain and Ireland, Sweden and Norway, Denmark, Holland, Belgium, Spain, Portugal, Italy, Greece, Rouma'nia,	King-doms.	Russia, Germany, Austro-Hungary, Turkey,	Empires.
		Servia, Montenegro, Bulgaria,	Princ's.
		France, Switzerland,	Repub-lics.

There are, besides, two very small republics: Andor'ra, in Spain, which has maintained its independence for 1,100 years; and San Marino (*sahn mah-re'no*), in Italy, the smallest and oldest republic in the world.—(*See map, p. 90.*)

Monarchical governments prevail in Europe; but only two of the monarchies named above, Russia and Montenegro (*mon-tay-nay'gro*), are absolute monarchies.

People.—Europe has a larger population in proportion to its size than any of the other Grand Divisions. Belgium is the most densely peopled country in the world. Most of the nations belong to the Caucasian race.

The Christian religion prevails in all the European countries except Turkey. The Turks are Mohammedans. Scattered among the various nations are about 2,000,000 Jews.

The Caucasian nations of Europe are all offshoots of the great Aryan (*ah're-an*) family, originally settled in Western Asia southeast of the Caspian Sea. At very early periods large bodies of Aryans, emigrating from their native land in quest of new abodes, successively found their way into Europe; and from these are derived the four stocks under which its Caucasian nations are classed. These are the CELTIC, in parts of Western Europe; the TEUTONIC, in England, Norway, Sweden, and Central Europe; the SLAVONIC, in Eastern Europe; and the ROMANIC, to which the people of Southern Europe mostly belong.

Questions.—How is Europe situated? What may it be called, and why? What is said of the size of Europe? Its greatest length? Its extreme breadth? How long is the coast-line? What does Europe owe to its good harbors?

Mention the political divisions of Europe, and what each is as regards government. Give an account of the two smallest republics. Name the two absolute monarchies of Europe. What can you say of the population of Europe? The religion? The four great stocks to which the Caucasian nations of Europe belong?

MAP QUESTIONS ON EUROPE.

General Questions.—How is Europe reached from North America? In what direction is it from South America? Bound Europe. What mountains and river are on its eastern boundary? Name the chief seas, gulfs, and bays, that indent the coast. What circle crosses Europe? In what zones is Europe? In what zone is the greater part? What countries extend into the North Frigid Zone? Point toward Europe.

Divisions.—What division of Europe extends farthest north? Farthest west? Which is the largest division of Europe? Which divisions border on the Arctic Ocean? On the Mediterranean Sea? On the Atlantic? On the Baltic Sea? On the North Sea? Which have no seacoast? What divisions are included in the British Isles?

Latitude.—What three capitals of Europe are in nearly the same latitude as the southern extremity of Greenland (*see left margin of map*)? Which is farther north, Halifax or Paris? What capitals are in about the same latitude as New York? Is any part of Europe as far south as Charleston, South Carolina?

Time, etc.—Does the sun rise first at St. Petersburg, London, or Washington? When it is noon at Washington, what is the time at London? At Moscow? Explain how a person in New York may receive a telegram the day before it is sent from Paris. When it is eight minutes past five at London, what o'clock is it at Hamburg?

Islands.—Name the largest islands near the mainland of Europe. How are the British Isles situated? What groups are north of Scotland? To what country do the Faroe (*fay'ro*) Islands belong? What other islands belong to Denmark? Name the principal islands of the Baltic Sea. Of the Mediterranean. Describe the situation of the Lofo'den Islands. Of No'va Zembla.

Capes.—What is the northernmost cape of Europe? Going west from North Cape, what land do we first reach? Where is the Naze? Name two capes that project into the Mediterranean. Where is Land's End? Cape Finisterre (*fin-is-tayr'—land's end*)?

Rivers.—Which river of Europe is the longest? Describe the Volga. What rivers flow into the Caspian Sea? Into the Black Sea? Describe the Danube, noted for its commerce. Why is the large river, Petch'ora, less important than the O'der and the Vis'tula? Describe the Don River. What is its chief branch?

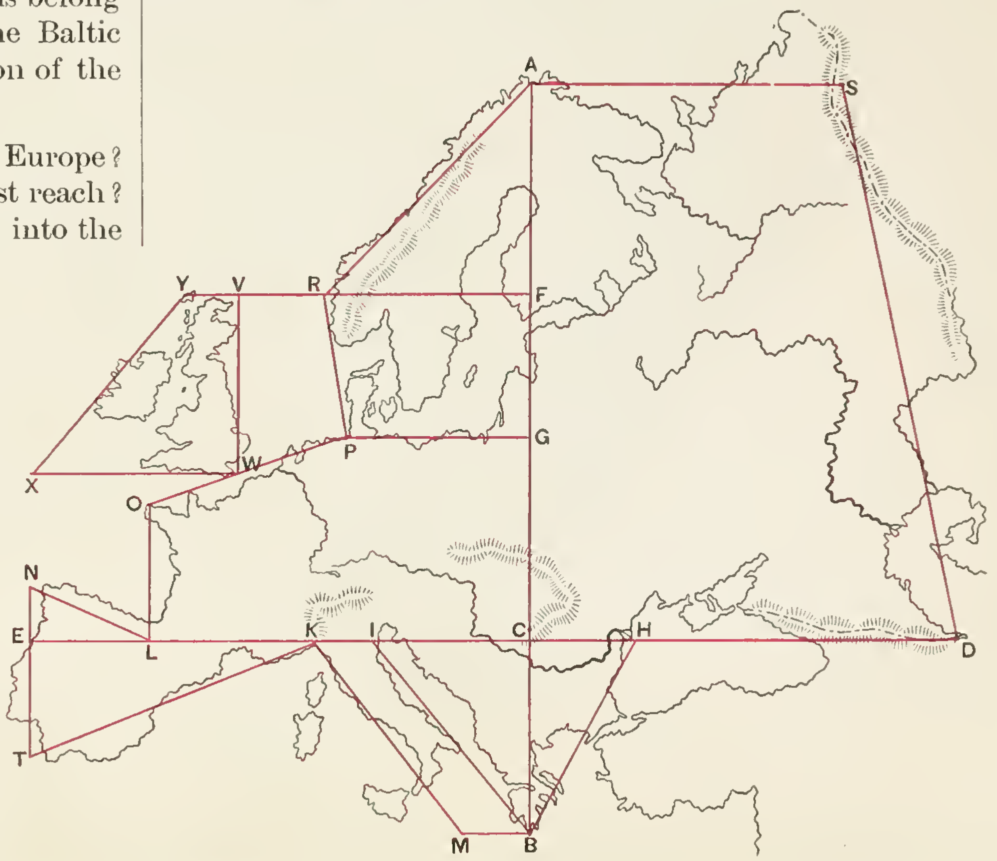
Travels.—Landing from a steamer at Havre (*hah'v'r*), in France, how can you go to Paris? In what direction, and how, would you go from Paris, to take a steamer on the Mediterranean Sea? How could you go from Paris to Vienna, and through what cities would you pass? With what Russian cities is Vienna connected by rail? What city is the chief railroad center of Russia? At what city on the River Vistula do railroads from Moscow and St. Petersburg join? What cities in the north of the German Empire are connected by railroad?

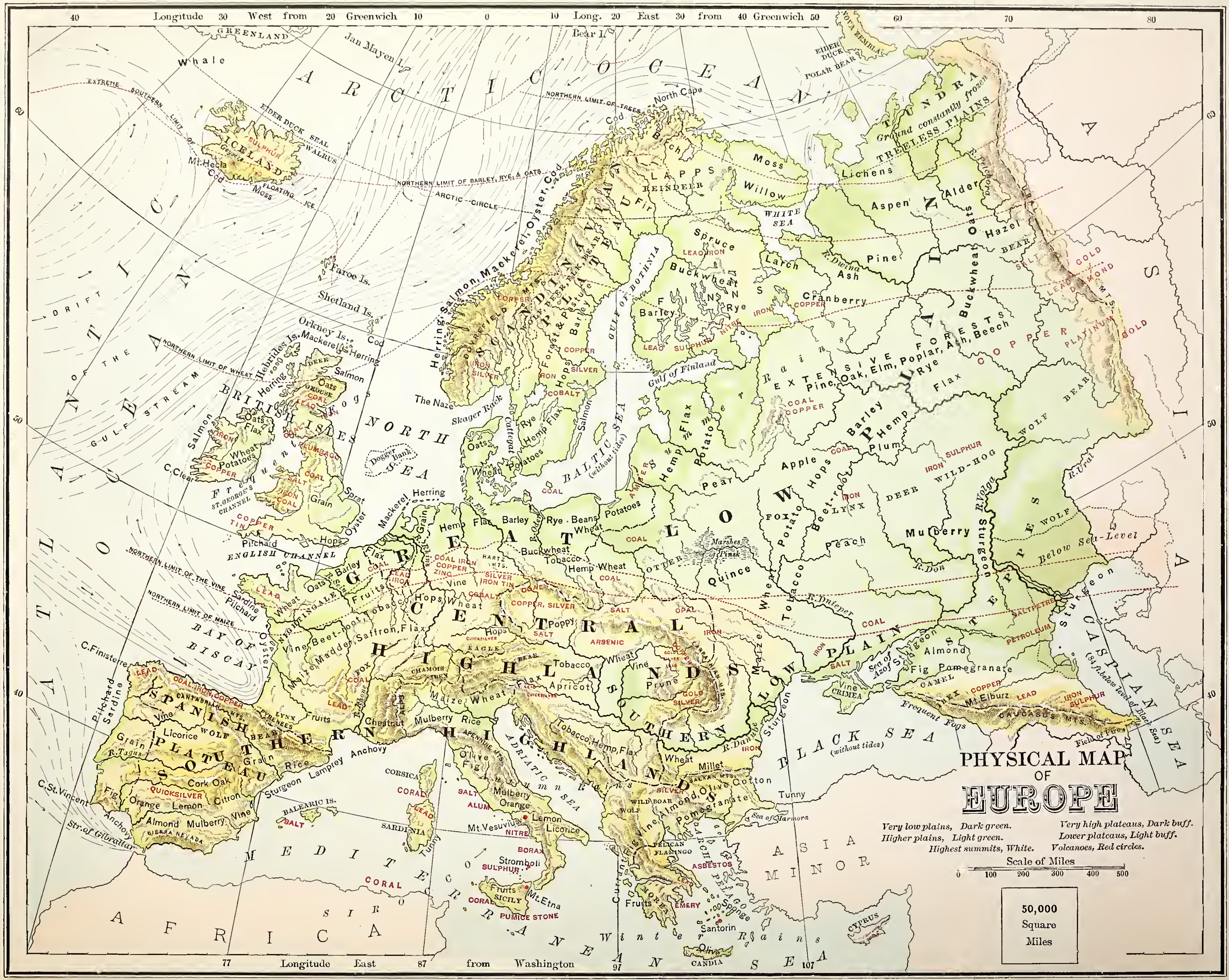
Voyages.—On what waters does a vessel laden with grain sail, from Odessa, in Russia, to London, in England? A vessel leaving Trieste (*tre-est'*) with a cargo of wine and oil, must pass through what waters to reach the capital of Sweden? How can one sail from Archangel (*ark-ayn'jel*), the oldest port in Russia, to Cronstadt (*krone'staht*), its chief naval station? Imagine yourself sailing up the Danube from its mouth; what cities would you successively pass?

DIRECTIONS FOR DRAWING THE MAP.

Draw the vertical line A B = 2,390 mi.
Take A F = 660 mi., F G = 480 mi., G C = 630 mi.
Draw the horizontal lines A S = 1,000 mi., F Y = 1,110 mi., G P = 600 mi., C D = 1,370 mi., C E = 1,600 mi., and B M = 220 mi.
Take F R = 660 mi., C H = 310 mi., C I = 510 mi.
Take I K = 196 mi., K L = 522 mi.
Draw the vertical lines E T = 370 mi., E N = 170 mi., L O = 410 mi.
Draw S D, H B, B I, M K, K T, N L, O P, P R, R A.
Take R V = 270 mi. Draw the vertical line V W = 580 mi.
Draw the horizontal line W X = 650 mi. Draw X Y.

With the aid of the construction-lines, draw the outline of the Grand Division, and of the islands Sicily, Sardinia, and Corsica. Insert the River Danube, the Volga, and the Rhine; the Pyrenees, the Alps, the Carpathian, Caucasus, and Ural Mountains.





PHYSICAL MAP OF EUROPE

Very low plains, Dark green.
Higher plains, Light green.
Highest summits, White.
Very high plateaus, Dark buff.
Lower plateaus, Light buff.
Volcanoes, Red circles.

Scale of Miles

0 100 200 300 400 500

50,000 Square Miles

PHYSICAL DIVISIONS AND FEATURES.

SURFACE.

Low Plains.—Highlands.—(*Refer to opposite map.*) Most of Europe is level and low. The whole eastern part consists of a vast low plain, continued in a wide strip skirting the Baltic and North Seas, and extending to the Bay of Biscay. South of the western part of this Great Low Plain are the Central Highlands. South of the latter, and separated from them in parts by low plains lying on the Danube and the Po, are the Southern Highlands, which border the Mediterranean Sea.

The eastern part of the peninsula occupied by Norway and Sweden belongs to the Great Low Plain. The western part forms the Scandinavian Plateau; Scandinavia was the ancient name of the peninsula.

Map Questions.—What countries are included, in whole or in part, in the Great Low Plain (*compare with map, p. 78*)? What is the northeastern extremity of this physical division called? Describe the Tundra. What part of Europe is below sea-level? How much lower is the Caspian than the Black Sea?

What is the southern part of the Great Low Plain called? On what waters does the Southern Low Plain lie? Over what countries do the Central Highlands extend? In what physical division are the Mediterranean countries included? What plateau forms the western part of the Southern Highlands?

Mountains.—The highest mountains wholly in Europe are the Alps, the central part of a great system which, with slight breaks, traverses the Central and the Southern Highlands from the Atlantic Ocean to the Black Sea. The Pyrenees (*pĭr'e-neez*) and the Canta'brian Mountains form the western part of this system; the Balkan (*bahl-kahn'*) Mountains, the eastern.

Offshoots from this system traverse the three southern peninsulas, and of these the Apennines, in Italy, are the most noted. From the eastern part of the Central Highlands rise the Carpa'thian Mountains, continued westward in lower ranges, which soon curve to the south toward the upper Danube and the Alps.

Referring to map, p. 78, describe each range named.

Mont Blanc, the loftiest peak of the Alps, has an elevation of nearly three miles. Perpetual snow crowns the highest summits of the Alps, and in the intervening valleys are great glaciers, looking like frozen torrents, perhaps several hundred feet in thickness. Creeping down about two feet in a day, they finally reach the snow-line, and, melting, give rise to mountain-streams. The Alps present the most sublime scenery in Europe. They are crossed by carriage-roads and railroads, through several passes.

The Great Low Plain is bounded on the east by the Ural Mountains, which are noted for the mineral treasures on their Asiatic slopes. The Caucasus Mountains, forming the southern boundary of Europe between the Black and Caspian Seas, contain Mount Elburz (*el-boorz'*), the highest peak of Europe (18,526 feet).

Map Questions.—In what direction do most of the important mountain-ranges of Europe extend? What ranges run in the opposite direction? What range is in southern Spain? Describe the Dovrefield (*do-vre-fe-eld'*) Mountains. How is Mont Blanc situated? What volcano is in Italy? In Sicily? Where is the island of Stromboli (*strom'bo-le*), which contains a volcano constantly in eruption and called "the Lighthouse of the Mediterranean"? In what group is it (*map, p. 90*)?

DRAINAGE.

Rivers.—Europe is well supplied with navigable rivers. The largest belong to the Great Low Plain. The Volga is the chief natural channel of commerce in southern Russia, the Dwina in northern Russia. A canal connecting branches of these two rivers establishes communication between the Caspian and White Seas. The Dnieper (*ne'pe̤r*) and the Don drain extensive basins, and are important commercially.

The Central Highlands contain the sources of the Danube, the Rhine, the Rhone, and other important rivers having large commercial and manufacturing cities on their banks.

Lakes.—Europe is not noted for large lakes. The principal lake-region is in northwestern Russia. Among the Alps, small but deep lakes are numerous.

Map Questions.—Into what waters do the streams on the northern slope of the Central Highlands flow? Into what do the chief rivers of France flow? Of Spain? Of Sweden? Describe the Dnieper River. Name the largest lake of Russia (*see map, p. 78*). Describe Lake Lad'oga. What large lake is near it? What lakes are in Sweden? What parts of Europe does the Gulf Stream reach? What is its effect on those regions?

CLIMATE.—VEGETATION.

Temperature.—Under the influence of the warm Gulf Stream and southwest winds from the Atlantic, the climate on the western coast of Europe is milder and more uniform than that of the inland regions. It is also much warmer than in the same latitudes of America. The unexplored ice-fields of middle Greenland are no farther north than Hammerfest, the most northerly town of Europe; yet at the latter place fisheries are carried on in the harbor all winter without hindrance from ice.

In the northernmost regions back from the Atlantic, the cold is severe and long-continued, and vegetation is sparse. During most of the year, polar blasts sweep over the northern plains with unbroken force.

Central Europe is warmer in the west than in the east. The grains, root-crops, and fruits, of the temperate zones flourish.

Southern Europe, having a southerly slope and sheltered from the north winds, while it is open to hot winds from Africa, has an almost tropical climate except in the mountainous regions. On the Mediterranean, rice, cotton, the mulberry, the olive, and the orange, thrive in the latitude of southern New England.

Rainfall.—The rainfall is heaviest on the coasts, and in the warm regions of the south. Why?

Questions.—Name the principal physical divisions of Europe, and describe the situation of each. What are the highest mountains wholly in Europe? Describe the system to which they belong. By what are the three southern peninsulas traversed? What mountains rise from the eastern part of the Central Highlands? Describe the Alps. What mountains bound the Great Low Plain on the east? For what are the Ural Mountains noted? What is the highest peak in Europe? In what range is it?

Name and describe some of the rivers of the Great Low Plain. What rivers rise in the Central Highlands? Where is the principal lake-region? Describe the Alpine lakes. Give an account of the climate on the western coast. In the northern regions back from the Atlantic. In Central Europe. In Southern Europe. The rainfall.

Map Questions.—Through what countries, and what part of them, does the line denoting the northern limit of trees run? The line denoting the northern limit of wheat? The line denoting the northern limit of the vine? What grain has nearly the same northern limit as the vine? Where are extensive forests? Where are hemp and flax raised?

Where is the cork-oak produced? Licorice? Beet-root? The chestnut? Where is the reindeer found? The eider-duck? The polar bear? What animals are found on the Scandinavian Plateau? In central Russia? On the steppes near the Caspian Sea? Among the Alps? The Pyrenees? Where are oysters taken? Where is sponge obtained? Coral?

What fish are taken off the coast of Norway? Of Holland? Along the Mediterranean coast of France and Spain? In the Black Sea? In the Volga? What mineral deposits do the Caucasus Mountains contain? The Cantabrian Mountains? The Carpathian Mountains? The Ural Mountains? Where is quicksilver found? Amber? Copper? Arsenic? Tin? Where are the principal coal-fields situated?

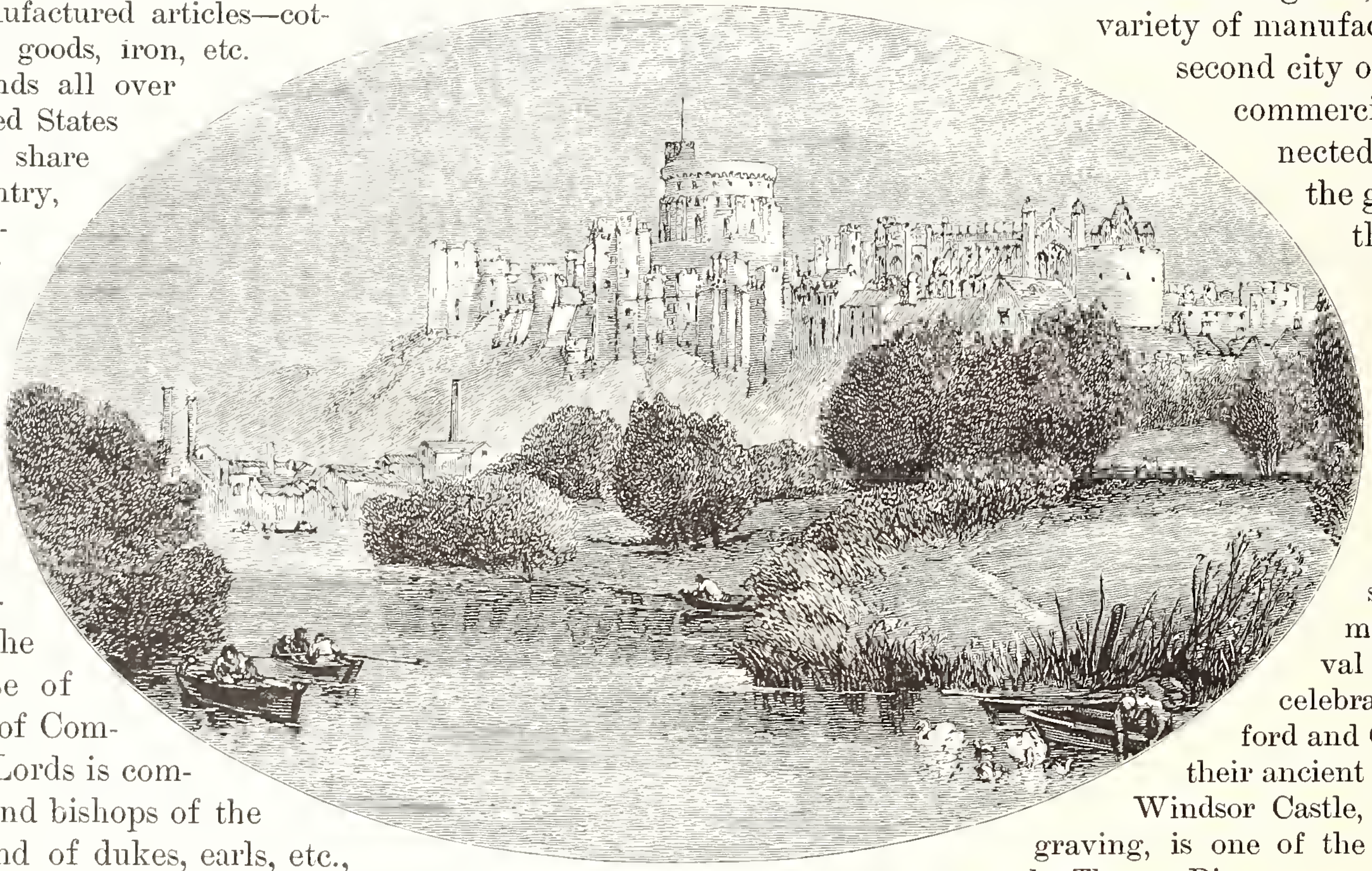
GREAT BRITAIN AND IRELAND.

The United Kingdom of Great Britain and Ireland embraces England, Wales, Scotland, and Ireland. The first three make up the island of Great Britain; and this, with Ireland and smaller adjacent islands, forms the group called the British Isles.

Great Britain stands among the first countries of Europe. It surpasses all nations in maritime power, commerce, manufactures, and the production of coal, iron, and tin. The sun never sets on its dominions, for it has possessions in all parts of the world. The United Kingdom and these dependencies constitute the British Empire, which has an area of about 8,250,000 square miles, and a population of more than 300,000,000.

Commerce.—The vast commerce of Great Britain, one of her main sources of wealth, employs about 20,000 merchant-vessels and 200,000 seamen.

The chief imports are articles of food (grain, flour, salted meat, sugar, tea, coffee, etc.) and raw materials (such as cotton, wool, silk, and timber) to be used in manufactures. Four-fifths of the exports are manufactured articles—cotton, woolen, and linen goods, iron, etc. British commerce extends all over the globe, but the United States enjoys a much larger share of it than any other country, furnishing Great Britain with most of her cotton, tobacco, and imported bread-stuffs.



Windsor Castle.

Government.—The government is a constitutional hereditary monarchy. The legislative power is vested in a Parliament, consisting of the sovereign, the House of Lords, and the House of Commons. The House of Lords is composed of archbishops and bishops of the Church of England, and of dukes, earls, etc., who for the most part receive their titles by inheritance. The House of Commons consists of about 650 members from England and Wales, Scotland, and Ireland, representing boroughs, counties, and the universities, and chosen by electors having certain qualifications.

Climate.—The climate of the British Isles is mild, uniform, and moist. The ocean not being subject to extremes of temperature, its winds modify the heat in summer and the cold in winter.

ENGLAND,[*] though not much larger than New York or Pennsylvania, contains about one-third as many inhabitants as the whole of North America. It is the great commercial and manufacturing division of the United Kingdom.

The most productive agricultural regions are east of the low ridge which crosses the country from north to south. Wheat is the principal crop; barley, oats, potatoes, and hops, are also largely cultivated. Fine breeds of cattle and sheep are raised.

Manufacturing is the leading branch of industry. The large manufacturing cities are mostly on or near the coal-fields in the north-central part, where fuel is conveniently obtained. Manchester, the third city of England in population, has the most extensive cotton-factories in the world. Leeds is the great manufacturing center for woolens, Bradford for worsted goods, Nottingham (*not'ting-a̤m*) for lace and hosiery, Birmingham (*bir'ming-a̤m*) for machinery and hardware, and Sheffield for cutlery.

Minerals.—Coal and iron deposits are abundant. Newcastle-upon-Tyne (*nu-kas'se̤l*) is the chief coal-market, and one of the great iron-manufacturing centers. There are valuable mines of tin and copper in the southwest. Lead is produced in large quantities.

Commercial Cities.—London, the capital of the kingdom, situated on both sides of the Thames (*temz—see small map opposite*), is the largest and richest city in the world (population, 3,814,571). Its area is 118 square miles, and it contains many celebrated buildings—the Tower, Parliament-Houses, St. Paul's Cathedral, Westminster Abbey, etc. London engrosses a large share of the commerce of the kingdom, and also carries on a variety of manufactures. Liverpool, the second city of England in size and commercial importance, is connected by steam-packets with the great ports of America, the Mediterranean Sea, Australia, etc.

Bristol is a busy commercial city of the west of England. Hull carries on an active trade with ports on the North Sea and the Baltic. On the southern coast are Portsmouth, the principal naval station, and Brighton, a celebrated watering-place. Oxford and Cambridge are noted for their ancient universities.

Windsor Castle, represented in the engraving, is one of the royal residences; it is near the Thames River.

Map Questions.—In what part of Great Britain is Wales? England? Scotland? What hills are on the northern boundary of England? What waters surround Ireland? With what cities does Hull communicate by steamers? To what English ports do steamers from New York run? With what city do steamers connect Quebec? Where is Dover? Describe Bristol Channel. The English Channel. The Strait of Dover.

Name the principal Channel Islands, noted for their fine breeds of cows. How are these islands situated? Describe the Isle of Wight. The Isle of Man, where Manx, a Celtic dialect, is still spoken. The Scilly (*sil'le*) Isles, peopled mainly by fishermen. Where is Mount Snowdon? Describe the Thames River. What places are on the Thames?

Where is the beautiful Lake Win'dermere? Describe the situation of York, noted for its minster, or cathedral. What river is on the boundary between England and Scotland? What battle-field, celebrated for a victory of the English over the Scotch (1513), is near the Tweed? What is the chief railroad center of England? Of Wales? What mountains are in Wales? What large island is off the coast of Wales?

What is a firth? Beginning at the north, and following the coast of Great Britain round to the starting-point, name the principal indentations. What hills are in Scotland? Where is Ben Nev'is, the highest mountain of Great Britain (4,368 feet)? Where is Bannockburn, famous for the great victory gained by the Scots, under Bruce, over the English, in 1314?

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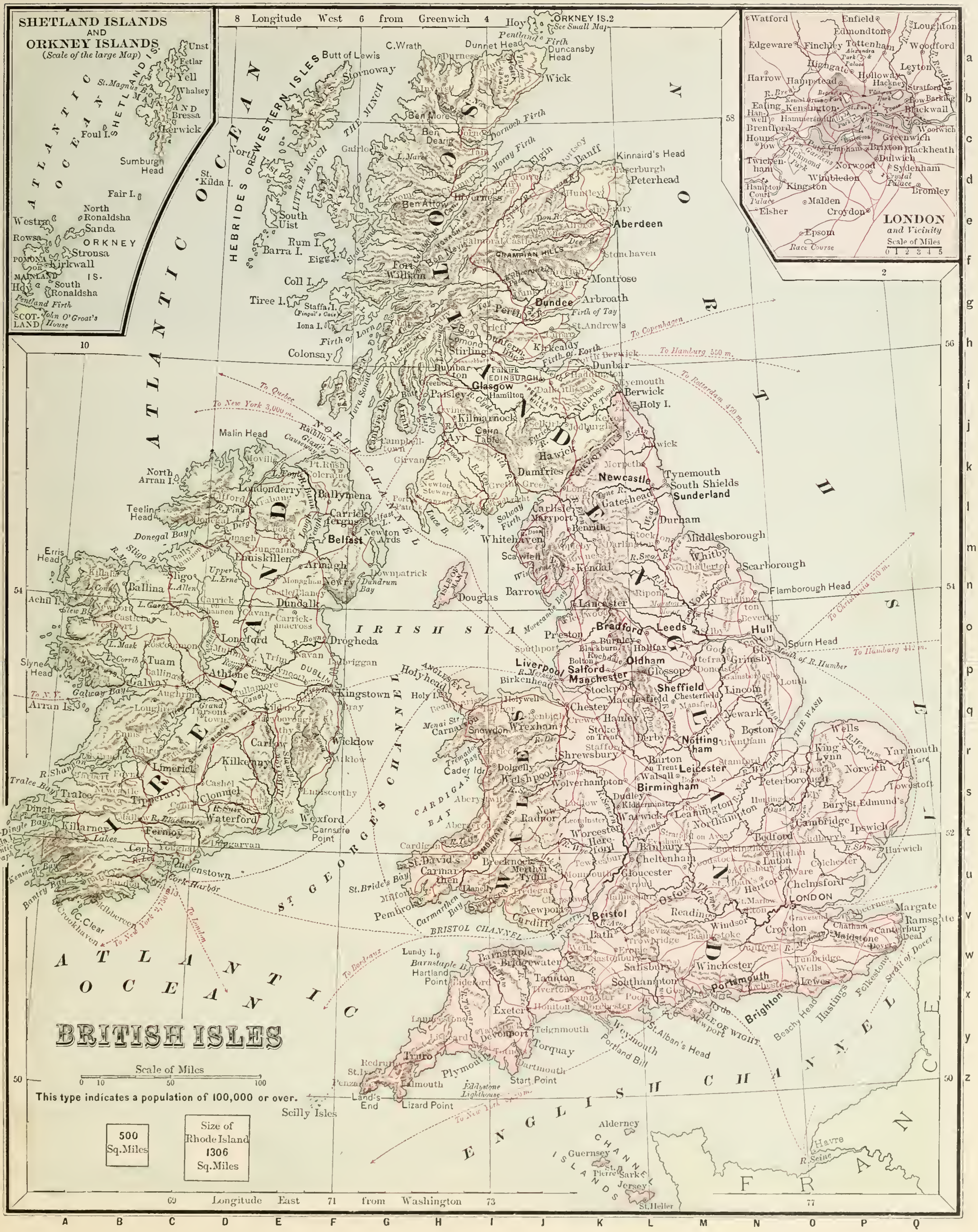
[*] For the area, population, and other statistics, of the European countries, see Table on p. 94.—As heretofore directed, describe the situation of each city, when it is first mentioned in the text.


BRITISH ISLES
Scale of Miles
0 10 50 100
This type indicates a population of 100,000 or over.
500 Sq.Miles
Size of Rhode Island 1306 Sq.Miles
SHETLAND ISLANDS AND ORKNEY ISLANDS
(Scale of the large Map)
Unst
Fetlar
Yell
Whalsey
St.Magnus B.
SHETLAND IS.
MAINLAND
Bressa
Lerwick
Foul I.
Sumburgh Head
Fair I.
North Ronaldsha
Westra
Sanda
Rowsa
ORKNEY
Stronsa
POMONA OR MAINLAND
Kirkwall
IS.
Hoy
South Ronaldsha
Pentland Firth
SCOTLAND
John O'Groat's House
LONDON and Vicinity
Scale of Miles
0 1 2 3 4 5
Watford
Enfield
Edmondton
Loughton
Edgeware
Finchley
Tottenham
Woodford
Alexandra Park & Palace
Highgate
Leyton
Harrow
Hampstead
Holloway
Hackney
Stratford
Regent's Park
Kensington
Ealing
Barking
Blackwall
Hanwell
Hammersmith
Brentford
Woolwich
Hounslow
Putney
Clapham
Brixton
Greenwich
Blackheath
Twickenham
Richmond
Norwood
Dulwich
Sydenham
Wimbledon
Crystal Palace
Hampton Court Palace
Kingston
Bromley
Elsher
Malden
Croydon
Epsom
Race Course
8 Longitude West 6 from Greenwich 4
ORKNEY IS.2
See Small Map
Hoy
Pentland Firth
Duncansby Head
Butt of Lewis
C.Wrath
Dunnet Head
Wick
Stornoway
THE MINCH
Ben More
Ben Dearig
Dornoch Firth
HEBRIDES OR WESTERN ISLES
North Uist
LITTLE MINCH
Moray Firth
Elgin
Banff
Kinnaird's Head
Fraserburgh
Peterhead
St. Kilda I.
Inverness
Ben Attow
South Uist
Aberdeen
Barra I.
Rum I.
Eigg I.
Ben Nevis
Fort William
GRAMPIAN HILLS
Stonehaven
Coll I.
Montrose
Tiree I.
Staffa I.
Fingal's Cave
Iona I.
Dundee
Arbroath
Firth of Tay
Perth
Firth of Lorn
St.Andrew's
Stirling
Kirkcaldy
Firth of Forth
Colonsay
Dunfermline
North Berwick
Dunbar
EDINBURGH
Falkirk
Dumbarton
Glasgow
Paisley
Hamilton
Berwick
Holy I.
Kilmarnock
Ayr
Cairn Table
Jedburgh
Hawick
CHEVIOT HILLS
Jura Sound
Campbelltown
Girvan
Dumfries
Newcastle
Tynemouth
South Shields
Sunderland
Gateshead
Durham
Carlisle
Maryport
Penrith
Solway Firth
Whitehaven
Middlesborough
Stockton
Whitby
Scarborough
Kendal
Northallerton
Flamborough Head
Ripon
York
Lancaster
Barrow
Douglas
ISLE OF MAN
Bradford
Leeds
Hull
Spurn Head
Preston
Southport
Blackburn
Burnley
Halifax
Oldham
Rochdale
Bolton
Liverpool
Salford
Manchester
Birkenhead
Glossop
Sheffield
Grimsby
Mouth of R. Humber
Louth
Chesterfield
Lincoln
Stockport
Macclesfield
Chester
Holyhead
ANGLESEY I.
Holy I.
Wrexham
Snowdon
Carnarvon
Menai Str.
Hanley
Stoke on Trent
Newark
Boston
Derby
Nottingham
THE WASH
Stafford
Shrewsbury
Burton on Trent
Leicester
Wells
King's Lynn
Yarmouth
Norwich
Cader Idris
Dolgelly
Welshpool
Wolverhampton
Walsall
Birmingham
Peterborough
Lowestoft
CARDIGAN BAY
Aberystwith
Dudley
Kidderminster
Leamington
Northampton
Bury St.Edmund's
Cambridge
Ipswich
New Radnor
Warwick
Worcester
Hereford
Bedford
Harwich
CAMBRIAN MTS.
WALES
Cardigan
St.David's
Carmarthen
Brecknock
Merthyr Tydfil
Cheltenham
Gloucester
Oxford
Luton
Colchester
Hertford
Chelmsford
St.Bride's Bay
Milford
Pembroke
Llanelly
Swansea
Newport
Cardiff
Bristol
Reading
LONDON
Margate
Ramsgate
BRISTOL CHANNEL
Bath
Windsor
Croydon
Chatham
Maidstone
Canterbury
Deal
Dover
Lundy I.
Barnstaple
Bridgewater
Salisbury
Winchester
Tunbridge Wells
Strait of Dover
Hartland Point
Taunton
Southampton
Portsmouth
Lewes
Folkestone
Hastings
Brighton
Beachy Head
Exeter
ISLE OF WIGHT
Newport
Launceston
Devonport
Teignmouth
Weymouth
Portland Bill
St.Alban's Head
Torquay
Truro
Plymouth
Dartmouth
Start Point
Eddystone Lighthouse
Penzance
Falmouth
Land's End
Lizard Point
Scilly Isles
ENGLISH CHANNEL
Alderney
CHANNEL ISLANDS
Guernsey
St.Pierre
Sark
Jersey
St.Helier
Havre
R. Seine
FRANCE
ATLANTIC OCEAN
NORTH SEA
NORTH CHANNEL
IRISH SEA
ST. GEORGE'S CHANNEL
SCOTLAND
ENGLAND
IRELAND
Malin Head
Rathlin I.
Giant's Causeway
Moville
North Arran I.
Londonderry
Coleraine
Ballymena
Teelin Head
Carrickfergus
Belfast
Newton Ards
Donegal Bay
Enniskillen
Armagh
Newry
Downpatrick
Dundrum Bay
Erris Head
Sligo
Sligo Bay
Ballina
Upper L. Erne
Achil I.
Castlebar
Westport
Carrick on Shannon
Cavan
Dundalk
Castleblaney
Carrickmacross
Longford
Drogheda
Slyne Head
Tuam
Athlone
Navan
DUBLIN
Galway
Galway Bay
Kingstown
Arran Is.
Wicklow
Carlow
Kilkenny
Limerick
Tipperary
Tralee
Tralee Bay
Clonmel
Enniscorthy
Wexford
Carnsore Point
Dingle
Dingle Bay
Killarney
Waterford
Fermoy
Valentia I.
Atlantic Telegraph
Cork
Queenstown
Cork Harbor
Kenmare Bay
Bantry Bay
Skibbereen
C.Clear
Crookhaven
To Quebec
To New York 3,000 m.
To Copenhagen
To Hamburg 550 m.
To Rotterdam 450 m.
To Christiania 650 m.
To Hamburg 412 m.
To N.Y.
To New York 2,750 m.
To London
To Bordeaux
To New York
60 Longitude East 71 from Washington 73 77
10
58
56
54
52
50
0
2
A B C D E F G H I J K L M N O P Q
a b c d e f g h i j k l m n o p q r s t u v w x y z

WALES.—From this rugged country the eldest son of the British sovereign derives his title of "Prince of Wales". The people, called Welsh, have descended from the ancient Celtic inhabitants of Britain. The soil is not well adapted to tillage. Flannel is manufactured. Mining and quarrying are leading interests, the country being rich in coal, iron, lead, and slate. On account of the abundance of fuel, copper-ore is brought to Swansea to be smelted. Merthyr Tydfil is the emporium of the iron region.

SCOTLAND consists of two parts—the Highlands, mostly mountainous, and the Lowlands, less rugged, but in general elevated and hilly. A line from Aberdeen to the Firth of Clyde marks the boundary between these sections. The Highlanders belong to the Celtic stock; the Lowlanders, like the English, mainly to the Teutonic. Picturesque lakes abound in the north.

A low plain, from the Firth of Clyde to the Firth of Forth, extends across the country. The Lowland farms are very carefully cultivated, and produce oats, barley, wheat, potatoes, etc. Sheep-farming is the favorite pursuit in the Highlands. Coal and iron are the most important minerals, and near their beds large manufacturing towns have grown up. Many persons find employment in the fisheries.

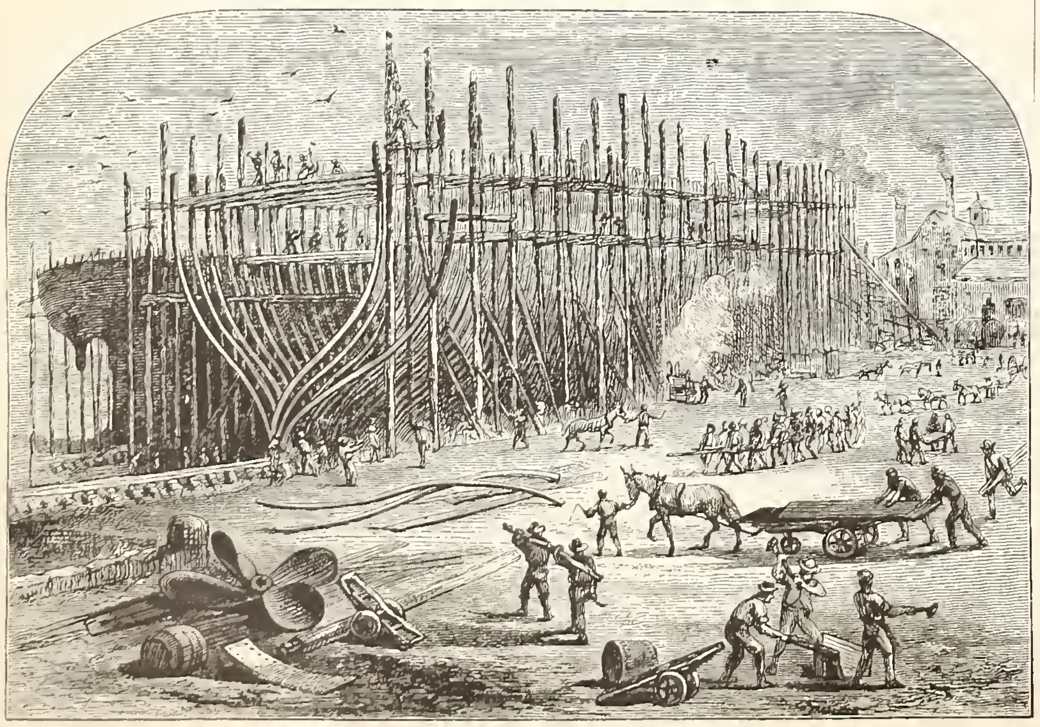
Cities.—Edinburgh (*ed'in-bur-rŭh*), the ancient capital, is a literary center, noted for its university. Leith, its port, is connected with Holland, Germany, and Denmark, by lines of steamers.

Glasgow, the largest city, owes its rapid growth to both commerce and manufactures. It is the chief outlet of a thriving district, and is extensively engaged in the construction of iron ships (*see engraving below*) and machinery, for which industries its situation in a great coal and iron field affords superior facilities.

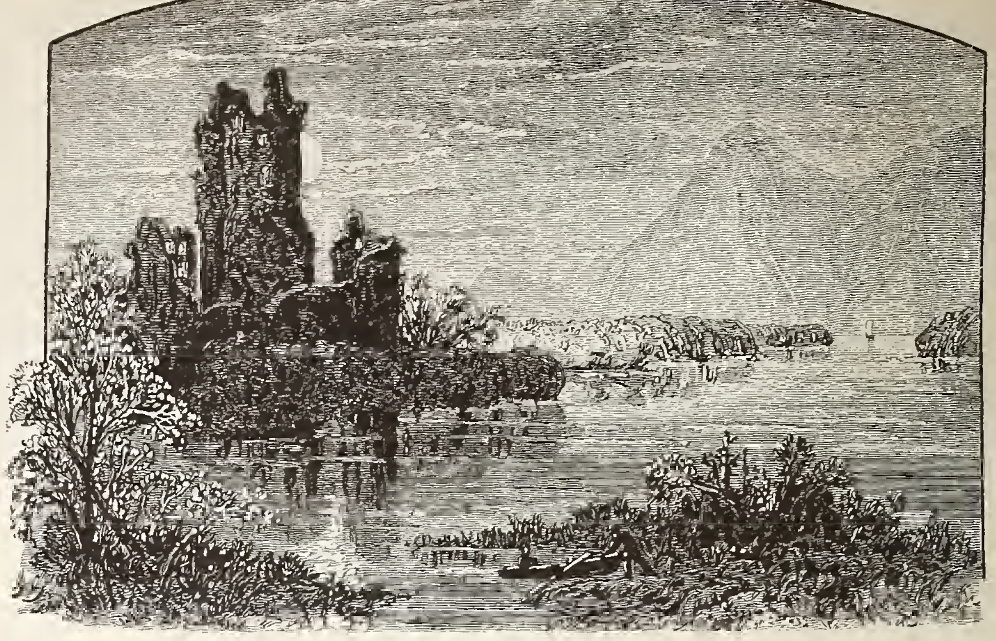
Dundee imports and manufactures flax, hemp, and jute; it is the principal seat of the British whale-fisheries. Aberdeen, called "the Granite City" from its valuable quarries, is a commercial and manufacturing place.

Island Groups.—To Scotland are attached the Hebrides (*heb're-deez*), the Orkney, and the Shetland Islands. Rocky and rough, they are valuable mainly for the adjacent fisheries, and as pasture-lands for hardy breeds of sheep, cattle, and ponies.

Map Questions.—(*Refer to map, p. 83.*) Describe the situation of the Shetland Islands. The Orkney Islands. The Hebrides. What island contains Fingal's Cave, a spacious cavern formed by rows of gigantic columns? What waters does the Caledonian Canal connect? Where is Loch Lo'mond?



Building of Iron Ships on the Clyde.



Ruins of Ross Castle, Lake Killarney, Ireland.

IRELAND, from the freshness of its vegetation, is called "the Emerald Isle". It is well supplied with harbors, and contains many beautiful lakes, of which the Lakes of Killarney are the most celebrated. The people are of Celtic descent.

Industrial Pursuits, etc.—Agriculture, including dairying and stock-raising, is the leading pursuit. Potatoes and oats are the most important products; the former are the main dependence of the people for food. English proprietors hold most of the land; the laboring classes are not prosperous, and the population has diminished by emigration.

Flax is extensively raised, and is made into linen at Belfast, the chief manufacturing city of the island. Iron deposits occur, but owing to the want of good coal they are not worked. Peat is used for fuel; the bogs from which it is obtained cover large areas. Fish are plentiful about the coasts. The leading exports are farm-products, live-stock, linen, and distilled spirits.

Dublin, the metropolis of Ireland, is the residence of the lord-lieutenant, who represents the British sovereign. It is noted for the beauty of its environs, and contains a celebrated university. Cork is the chief seaport.

Map Questions.—Name the principal rivers of Ireland. What bays indent the coast? Mention the chief port on the western coast. Where is Cape Clear? What island is the terminus of an Atlantic telegraph line? Where is Maynooth, the seat of a college which educates students for the Roman Catholic priesthood? Where is the Giant's Causeway, formed by vertical basaltic columns extending into the sea?

* * *

The British People.—The early inhabitants of the British Isles were Celts. In the middle of the fifth century, Saxons and Angles, from Germany, established themselves in Britain, and the part in which they settled became known as England (*Angleland*). The Teutonic element was thus introduced, and it was strengthened by the successful invasion of the island by Normans in 1066.—The king of Scotland was seated on the throne of England in 1603, and a legislative union of the two kingdoms was effected in 1707. Ireland, which had early been annexed to England by conquest, was united to Great Britain, under the same Parliament, in 1801.

Enterprise, energy, and perseverance, mark the Anglo-Norman character. These traits explain the acquisitions of territory which the English people have made in every quarter of the globe. Their principal dependencies are as follows:—

In Europe.—Gibraltar, in Spain ; the islands of Hel'igoland, in the North Sea, and Malta, in the Mediterranean.

In America.—Canada ; Newfoundland ; the Bermudas ; the Bahamas, Jamaica, and other West India Islands ; Balize ; British Guiana ; the Falkland Islands.

In Asia.—British India ; the Straits Settlements ; A'den, in Arabia ; the islands of Hong-Kong and Cyprus.

In Africa.—Sierra Leo'ne ; Gold Coast ; Cape Colony ; British Caffraria ; Natal (*nah-tahl'*) ; the islands of Ascension, St. Hele'na, and Mauritius (*mau-rish'e-us*).

In Oceania.—Australia, Tasma'nia, New Zealand, Norfolk Island.

Questions.—What does the United Kingdom of Great Britain and Ireland embrace ? How does it rank ? Of what is the British Empire composed ? What is its area ? Its population ? Give an account of the commerce of the United Kingdom. Of the government. Of the climate. Give an account of England ; its size ; agricultural products ; manufactures and manufacturing cities ; minerals ; commercial cities. Give an account of Wales ; its people ; its leading interests ; its towns. Give an account of Scotland and its people ; its agricultural products ; its minerals ; its leading pursuit ; its cities. The Scottish islands.

Give an account of Ireland ; its resources and industrial pursuits ; its exports ; its cities. Of what race were the early inhabitants of the British Isles ? How was the Teutonic element introduced ? How and when were Scotland and England united ? Ireland and Great Britain ? What are prominent traits of Anglo-Norman character ? What are due to these traits ? Mention some of the principal British dependencies.

NORTHERN EUROPE.

SWEDEN AND NORWAY.

General Description.—Sweden and Norway, united under one king, though each has its own legislative body and its own laws, occupy the northwestern peninsula of Europe. Sweden is the larger and more populous division. The coast furnishes good harbors, and on the Atlantic side is indented by numerous fiords (*fyords*)—long, narrow inlets, bounded by high rocks. The people are honest, hospitable, and industrious. Education is general.

These countries are so far north that there is a great difference in the length of the day at different seasons. At North Cape, the sun does not set from May 15th to July 29th.

Norway, mountainous and barren, does not yield sufficient grain for home needs. In Sweden a surplus of grain is produced, together with potatoes, flax, etc. In both countries manufactures are limited, in consequence of the want of coal.

Resources.—The wealth of the peninsula consists in its mines of iron and copper, its extensive pine-forests, and its fisheries. Swedish iron, smelted with charcoal, is of superior quality, and is in demand for the manufacture of cutlery. Iron, copper, grain, timber, tar, and the products of the fisheries, are exported.

Cod, herring, mackerel, and lobsters (exported by thousands to England), swarm on the Atlantic coast, and twenty thousand Norwegian fishermen are engaged in their capture. The Lofoden Islands are the chief seat of the cod-fishery ; twenty millions of fish are taken every year. Large quantities of cod-liver oil are manufactured here.—(*Consult Simmonds's "Commercial Products of the Sea," p. 214.*)

Cities.—Stockholm, the capital of the two kingdoms, is called "the Northern Venice," from its situation on islands in the channel connecting Lake Mae'lar with the Baltic. Gottenburg, the second city of Sweden, is a seat of commerce and manufactures.

Christiania (*kris-te-ah'ne-ah*) is the capital of Norway. Bergen trades largely in the products of the fisheries.

RUSSIA.

General Description.—Russia embraces the eastern half of Europe. Extending across the Ural Mountains, it also includes more than one-third of Asia, forming the largest empire in the world. The Russian Empire has an area of nearly 8,400,000 square miles, and a population of about 88,000,000.

The people of European Russia belong principally to the Slavonic stock, and to the Greek Church. The peasants are generally ignorant, and till 1863 were for the most part serfs, or slaves, owned by the crown, the nobles, or large landholders ; in the year just named the serfs were emancipated.

Productions.—Exports.—European Russia is a vast plain, barren in the extreme north, but containing in the north-central sections valuable forests—in the central and south-central districts, fertile grain-lands—and in the south, extensive plains, where immense herds and flocks find pasture. Rye is the staple food. Wheat, hemp, and flax, are largely raised for export.

The products of the forests and herds are also exported, and bristles of superior quality, the swine that produce them feeding on the beechnuts and acorns of the woodlands. England receives large supplies of grain from Odessa, the chief shipping-point on the Black Sea. Much of Russian commerce is carried on by means of fairs, which are frequented by traders from all parts of Europe and Asia. Kiev (*ke-ev'*) and Warsaw, formerly the capital of the kingdom of Poland, have each a yearly fair ; but the greatest fair in the world is that held at Lower Novgorod, at which goods to the value of $20,000,000 sometimes change hands.

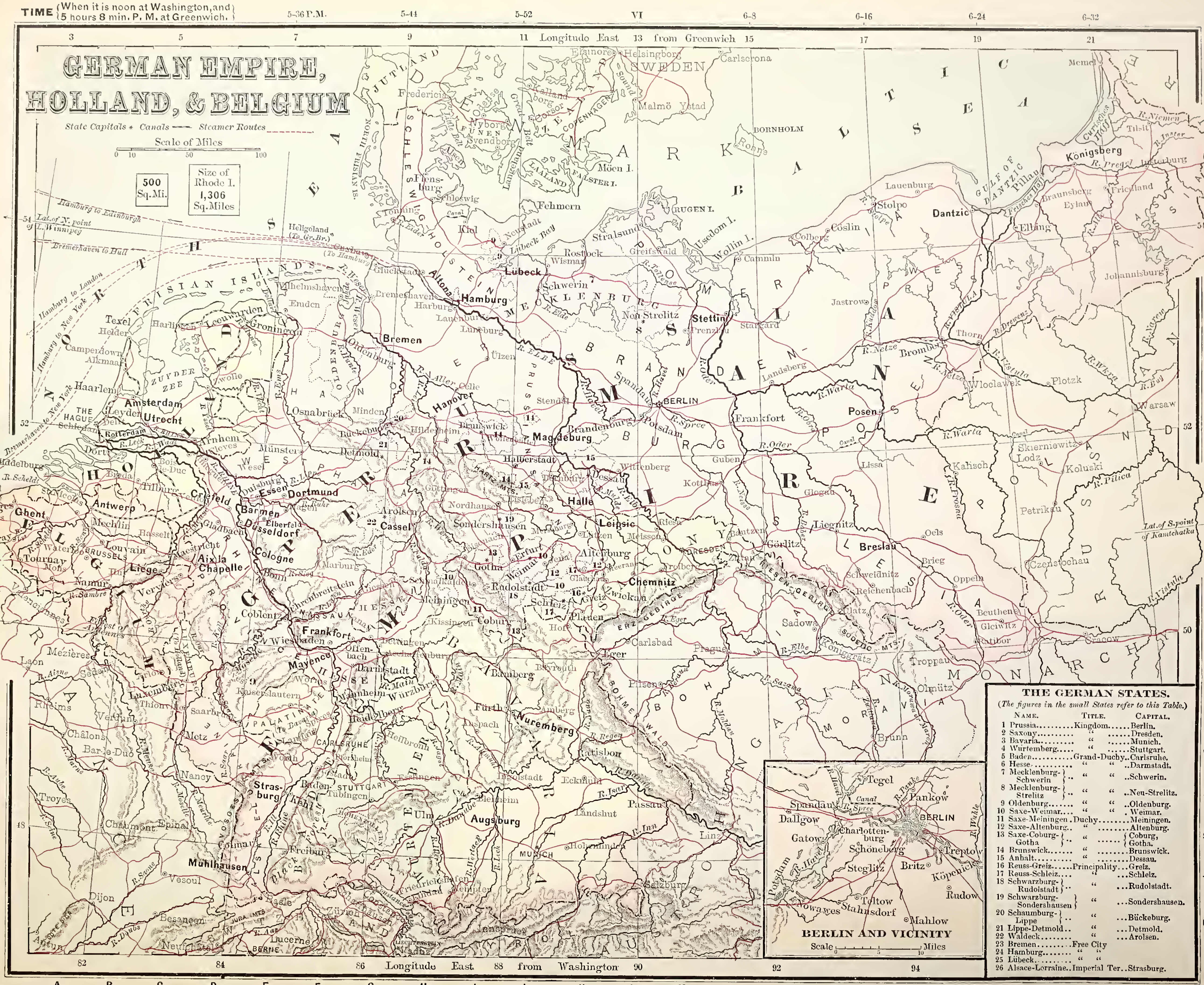
Various manufactures are produced, principally from materials raised in the country. Coal, iron, and copper, are found, but most of the mineral wealth is in Asiatic Russia.

St. Petersburg : Statue of Peter the Great.

Cities.—St. Petersburg, named from the Czar Peter the Great, who laid the foundation of Russia's prosperity, is the capital ; it engrosses much of the foreign commerce. Moscow (*mos'ko*) is the chief seat of domestic commerce, having, besides its railroad connections, water-communication with the Baltic, Black, and Caspian Seas ; it is a grand city, and was once the capital.

Map Questions.—(*Refer to map, p. 78.*) Bound Sweden. What are Skag'er-Raek and Cattegat ? Describe these straits. Describe the Baltic Sea. Name its chief arms. How are Lakes Wener (*way'nęr*) and Wetter situated ? Bound Norway. Bound Russia. What hills are in Russia ? Name the principal port on the White Sea. On the Gulf of Finland. On the Gulf of Riga (*re'gah*). On the Black Sea. On the Caspian. Where is Sebastopol (*sev-as-to'pol*), noted in the Crime'an War ? The Lapps and Finns are Mongolians ; what is the country of each people called, and where is it ?

GERMAN EMPIRE, HOLLAND, & BELGIUM



THE GERMAN STATES.

(The figures in the small States refer to this Table.)

	NAME.	TITLE.	CAPITAL.
1	Prussia	Kingdom	Berlin.
2	Saxony	"	Dresden.
3	Bavaria	"	Munich.
4	Wurtemberg	"	Stuttgart.
5	Baden	Grand-Duchy	Carlsruhe.
6	Hesse	" "	Darmstadt.
7	Mecklenburg-Schwerin	" "	Schwerin.
8	Mecklenburg-Strelitz	" "	Neu-Strelitz.
9	Oldenburg	" "	Oldenburg.
10	Saxe-Weimar	" "	Weimar.
11	Saxe-Meiningen	Duchy	Meiningen.
12	Saxe-Altenburg	"	Altenburg.
13	Saxe-Coburg-Gotha	"	Coburg, Gotha.
14	Brunswick	"	Brunswick.
15	Anhalt	"	Dessau.
16	Reuss-Greiz	Principality	Greiz.
17	Reuss-Schleiz	"	Schleiz.
18	Schwarzburg-Rudolstadt	"	Rudolstadt.
19	Schwarzburg-Sondershausen	"	Sondershausen.
20	Schaumburg-Lippe	"	Bückeburg.
21	Lippe-Detmold	"	Detmold.
22	Waldeck	"	Arolsen.
23	Bremen	Free City	
24	Hamburg	" "	
25	Lübeck	" "	
26	Alsace-Lorraine	Imperial Ter.	Strasburg.

CENTRAL EUROPE.

THE GERMAN EMPIRE.

How composed.—The German Empire is composed of twenty-six states, named, with their capitals, in the Table at the lower right-hand corner of the opposite map. The largest of these states is the Kingdom of Prussia; next in importance are the Kingdoms of Saxony, Bavaria, and Würtemberg. The empire is about one-tenth larger than California, and among the countries of Europe ranks next to Russia in population. Its people are principally of the Teutonic stock.

Government.—Three free cities under republican governments—Hamburg, Brem'en, and Lübeck—are included in the empire. Alsace-Lorraine (*ahl-sahs' lor-rane'*), acquired from France in the Franco-German War of 1870–'71, is an imperial territory. The other members of the empire, whether styled kingdoms, duchies, grand-duchies, or principalities, are limited monarchies.

The empire itself is also a limited monarchy. The legislative power is vested in a Federal Council, representing the individual states, and the Reichstag, or Diet of the Realm, representing the German people. The members of the latter body are elected by universal suffrage. The states have control of their own local affairs. The King of Prussia is Emperor of Germany.

Map Questions.—Bound the German Empire. On what bodies of water does it border? On which of these has it the longest coast-line? What part is mountainous? Name the two chief rivers that enter the Baltic Sea from Germany. Name two that flow into the North Sea.

Describe the Rhine. For what is the Rhine noted? *For its commerce and its picturesque scenery.* Name some places on the Rhine. What is the capital of the empire? How is Ber'lin situated? What capital in Canada is in about the same latitude as Berlin? Describe the situation of Dantzic, the chief grain-port. Stettin (*stet-teen'*). How do these cities communicate with the interior?

What is the capital of Saxony? Where is Dresden, noted for its art-treasures? Leipsic (*lipe'sik*) is famous for its annual fairs and the manufacture of books; how is it situated? Where is Hanover, which gave to England its present royal line? Name the capital of Würtemberg. How is Stutt'gart situated? Where is the Black Forest? Where are the Hartz Mountains?

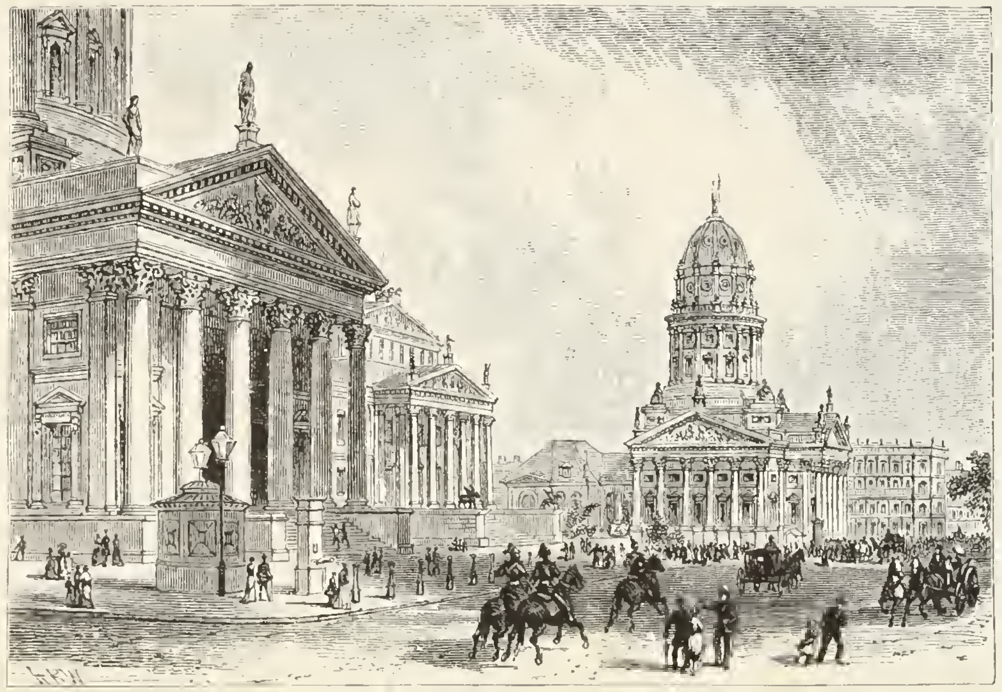
General Description.—The Germans are frugal, intelligent, and well-educated. Their universities are celebrated.

The leading pursuit is agriculture. Grain is raised in excess of home needs, and Great Britain takes large quantities of it. Flax and hemp are extensively cultivated, as well as beets for the manufacture of sugar. The warm southern valleys produce maize, and the vine flourishes, particularly along the Rhine. Cattle and sheep are reared.

Among the minerals are silver, zinc, iron, and coal. German manufactures are varied and extensive; they include, among other things, woven fabrics, wooden and metallic wares, wine, and beer. The commerce, both foreign and domestic, is of great magnitude.

Cities.—Berlin, the capital of both Prussia and the German Empire, is the seat of a celebrated university and of great industrial establishments. Hamburg, the second city of the empire, is also the leading seat of commerce on the "Continent" (or mainland of Europe). Breslau is the greatest wool-market of the Continent. Munich (*mu'nik*), the capital of Bavaria, is renowned for its university, library, and art-gallery. Frankfort-on-the-Main is a great financial center.

Questions.—How are Norway and Sweden situated? Describe their coast; their people; their long days; their productions; manufactures; resources; the fisheries; the chief cities. What does the Russian Empire embrace? What is its area? Its population? Give an account of the Russians; the country and its products; the exports; the fairs; the minerals. Describe the capital; Moscow. Of what is the German Empire composed? State what you can about its size; its government; the people; productions; minerals; manufactures; commerce; capital; other cities.



Berlin: Place des Gens d'Armes.

DENMARK, HOLLAND, BELGIUM.

DENMARK, one of the smaller kingdoms of Europe, embraces the northern part of the peninsula of Jutland, and a number of islands situated at the entrance of the Baltic Sea.

The country is low, the climate moist. Cattle-raising, dairying, and grain-growing, are the prevailing industries; accordingly, the chief exports are live-stock, butter, cheese, and breadstuffs. Germany and Great Britain divide between them the greater part of Danish commerce. Minerals and water-power are wanting, and manufactures are consequently unimportant.

Copenhagen, on the island of Zealand, is the capital, metropolis, and chief naval station.

Map Questions.—Bound Denmark. What makes its position important? What islands in the Western Hemisphere did we find belonging to Denmark? Bound Holland. Name the principal indentation of the coast. What great river has its mouths in Holland? By what are the rivers connected with one another? How are the manufacturing and commercial cities of Utrecht (*u'trekt*) and Leyden (*li'dḛn*) situated?

Bound Belgium. What is its chief port? *A.* Where is Ghent, noted for its cottons and linens? Where is Liége (*leej*), whose coal-mines supply fuel for the manufacture of firearms and machinery? Describe the situation of Waterloo, where the destinies of Europe were decided by the defeat of Napoleon in 1815.—(On the battle of Waterloo, *consult Creasy's "Decisive Battles of the World," p. 346.*)

HOLLAND, or THE NETHERLANDS, is a flat country, intersected by rivers and canals. Most of the surface is below the level of the sea, and is protected by high dikes. Land is reclaimed by inclosing it and pumping out the water with which it is covered.

Industrial Pursuits, etc.—The soil is cultivated with great care. The ordinary grains and root-crops, madder (used in dyeing), flax, and tobacco, receive attention; but Holland is best known for its dairy-products, and its excellent breeds of horses and horned cattle. Large quantities of dairy-produce are exported.

There is no coal, and peat is used for fuel. The streams furnish no water-power; but the thrifty Dutch make windmills perform all kinds of work. Their manufactures have a high reputation, particularly their linen, earthenware, paper, and gin. The Dutch are noted for their cleanliness, industry, and general education.

The situation of the country has naturally made commerce and fishing prominent pursuits. The Dutch were at one time the most enterprising and powerful maritime nation, and they still have valuable colonies in the East Indies (particularly the island of Java), the West Indies, and South America. The importation and distribution of their colonial products (coffee, sugar, spices, tin, etc.) give rise to a very profitable trade.

Cities.—THE HAGUE (*hayg*) is the seat of the court. AMSTERDAM is the constitutional capital and largest city; it is one of the chief commercial centers of Europe, and a great emporium for butter, cheese, spices, etc. Rotterdam, also, has an immense commerce.

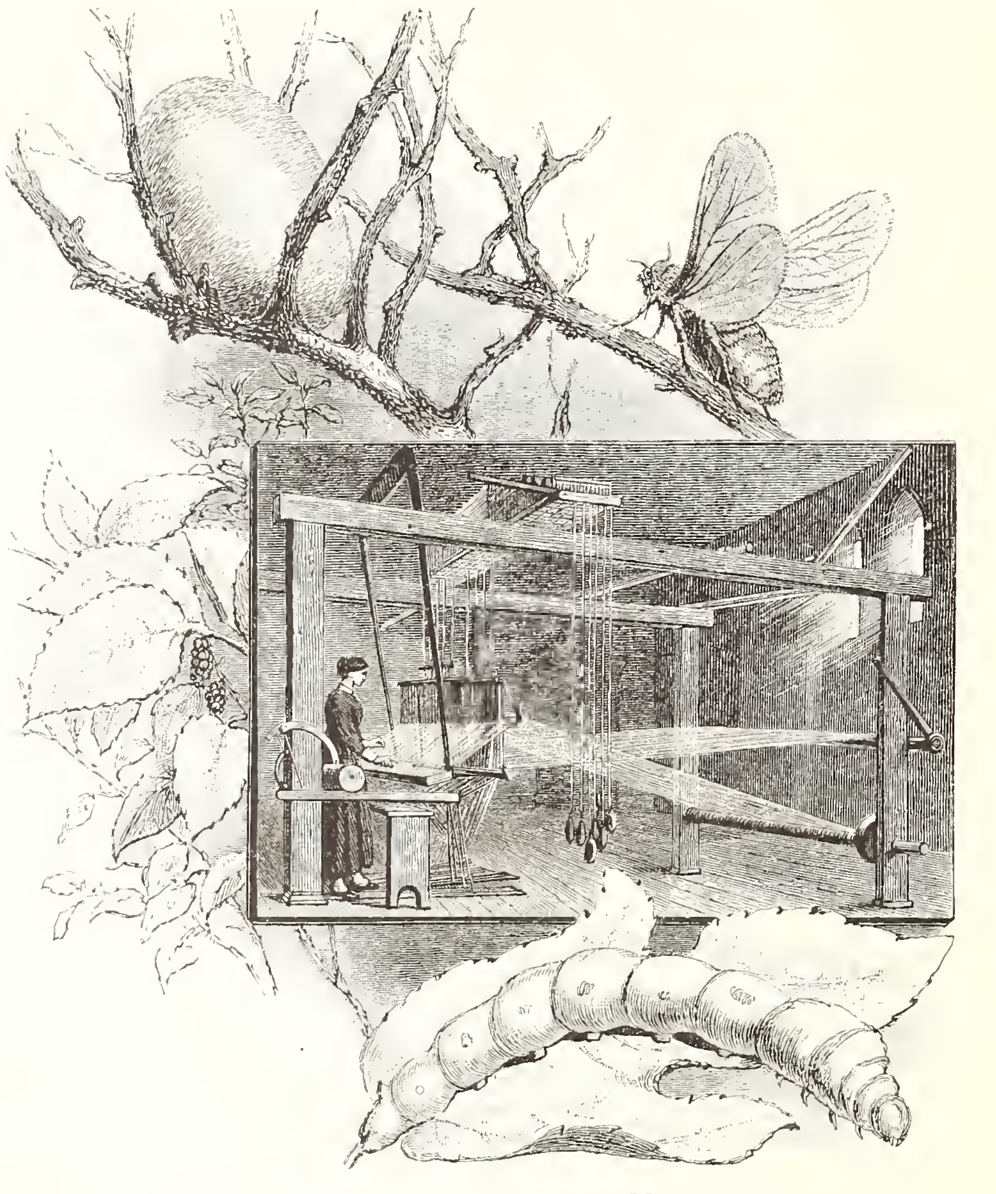
The Dutch cities are remarkable for their quaint red-brick houses, standing with the gables toward the streets. The latter are traversed by canals, which are spanned by drawbridges, and lined with broad quays. Vessels are seen in all parts, moving to and fro, loading and unloading.

BELGIUM is low and flat in the north, hilly and densely timbered in the south. The country is well watered, and inland trade is facilitated by canals. Rich in coal, iron, and other minerals, Belgium is one of the leading manufacturing countries of Europe.

The linens, laces, cotton goods, woolen cloths, carpets, and cutlery, of Belgium, are in high repute, and with coal, iron, and farm-products, constitute the chief exports. The principal imports are coffee, sugar, petroleum, hides, and raw materials to be manufactured. France is most largely interested in Belgian commerce. Agriculture is carried to great perfection.

People.—The population consists partly of Flemings, of the Teutonic stock and speaking the Dutch language,—and partly of Walloons, who are of mixed Teutonic and French blood, and speak a dialect of French.

Cities.—BRUSSELS, the capital and metropolis, is a great center of manufacturing industry. Antwerp, with a fine harbor on the Scheldt (*skelt*), is the principal seat of foreign commerce.



SILK: THE WORM, COCOON, MOTH, AND MANUFACTURE.

MAP QUESTIONS.—(*Refer to map, p. 90.*) What country is southwest of Belgium? Bound France. What mountains separate France from Spain? From Italy? What is the highest mountain in France? Where are the Cévennes (*say-ven'*) Mountains? What is the principal river flowing into the Mediterranean from France? Into the English Channel? Name the two principal rivers flowing into the Bay of Biscay. Describe the Loire (*lwahr*). What city is the port of Paris? *H.*

Name the leading French port on the Mediterranean. What French port is connected with Dover by steamers? Where is the beautiful city of Versailles (*ver-saylz'*), with its magnificent palace? What part of France is in the latitude of Halifax? When it is noon at Washington, what is the time at Paris? Point toward Paris. Bound Switzerland. What river issues from Lake Constance? From Lake Gene'va? How is Corsica situated? To what country does Corsica belong? Who was born on this island? *Napoleon Bonaparte.*

THE REPUBLIC OF FRANCE.

France, one of the great powers of Europe, is nearly three-fourths the size of Texas, and contains about three-fourths as many inhabitants as the United States. In manufactures, it ranks next to Great Britain. The state provides for public education. The French are distinguished for their taste and ingenuity, as well as for their eminent attainments in the arts and sciences. They are a mixed race, in which the Celtic, the Teutonic, and the Romanic stock are all represented, but the first predominates. The Roman Catholic religion prevails.

Agriculture.—The greater part of the people live by agriculture. The products of the north are the usual grains, root-crops, and fruits of the North Temperate Zone, including the beet, which is cultivated very largely for the manufacture of sugar. In the central and southern sections, under a warmer sky, maize and tobacco are raised; the vine produces its rich clusters, from which wines of wide renown are made; the orange and olive thrive, and the mulberry, valuable for the food it furnishes the silk-worm.

The engraving shows a silk-worm on leaves of the mulberry-tree. About five weeks after it is hatched, the worm begins to weave around itself its cocoon, which is formed of a fine continuous thread about 1,000 yards long, and is designed to protect it while in the chrys'alis state, before it emerges as a moth. The chrysalis having been killed, the threads from several cocoons are joined and carefully reeled off, forming "raw silk". After going through other processes, the raw silk is dyed, and woven by different kinds of looms into various fabrics.

Manufactures.—Minerals.—In the manufacture of silk goods the French stand unrivaled. Lyons, the second city of the republic, and St. Étienne, are the chief seats of this great national industry. For fine muslins, laces, and other fabrics, for porcelain and glass-ware, jewelry, clocks, watches, etc., France is no less noted. There are large deposits of coal and iron, which are turned to good account. Lead, also, abounds.

Commerce.—French commerce extends to all parts of the world. The United States receives from the republic large quantities of its woven fabrics, wines, brandy, and articles of luxury; and sends it in return cotton, tobacco, petroleum, copper, and in some years grain. Marseilles (*mar-saylz'*), the third city of the republic, has the greatest share of the foreign commerce. Havre (*hah'v'r*) and Bordeaux (*bor-do'*) are the next ports in extent of trade.

PARIS, the capital, is the second city of the world in population (2,225,916) and wealth, the acknowledged center of fashion; it is celebrated for its splendid public edifices, its scientific, literary, and educational establishments, and its artistic manufactures.

ST PETER'S AT ROME

Colonies, etc.—The island of Corsica, in the Mediterranean Sea, forms a department of France. The most important colonies are French Guiana in South America, and Algeria in Africa. France also possesses tracts in India and Indo-China, settlements in Western Africa, and islands in the West Indies and in Oceania.

THE REPUBLIC OF SWITZERLAND.

Switzerland, a land of snowy peaks, mountain-torrents, crystal lakes, picturesque valleys, and the grandest scenery, is a federal republic composed of twenty-two Cantons, or small states. Most of the people are Teutonic, and use the German language; the rest are of Celtic or Romanic origin, and speak French or Italian. The mountaineers depend mainly on the products of their flocks and herds; they display great skill in carving wood into toys and ornaments. Bread-stuffs and potatoes are imported; most of the foreign commerce is with France and Germany.

The exports consist of dairy-produce and manufactures. Geneva, the metropolis, is noted for its watches and jewelry. Basle (*bahl*) contains the largest ribbon-factory in the world. Zurich (*zoo'rik*) manufactures both silk and cotton goods, and is, besides, an educational center. BERNE, the capital, has the bear for its emblem; bears figure on its coins, and living bears are kept as part of the state property.

Questions.—What are embraced in Denmark? Describe the country; the industries; Copenhagen. Give an account of Holland; its productions; fuel; windmills; manufactures. Describe the Dutch. What are prominent pursuits? Where does Holland possess colonies? Describe its cities in general. Name the three most important cities. What kind of a country is Belgium? Mention its chief minerals; its exports; its imports. Give an account of the people. Of Brussels. Of Antwerp.

What is said of the size and rank of France? Of the French people, and their origin? Give an account of the agricultural products of France. Of the production of silk. Of the manufactures of France, and its manufacturing cities. Of its commerce, and commercial cities. Of its capital. Mention its chief foreign possessions. State all you know about Switzerland.

SOUTHERN EUROPE.

ITALY.

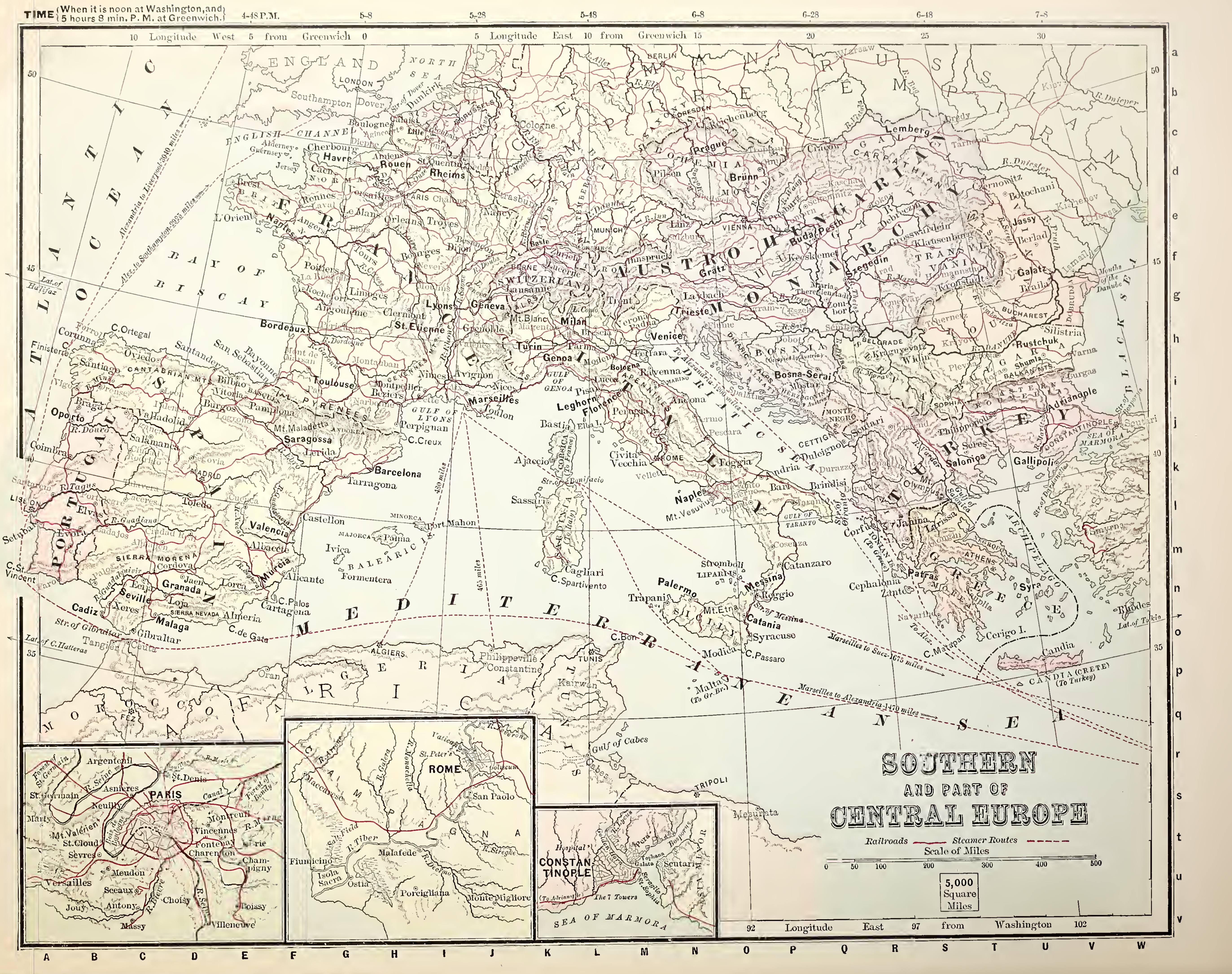
Italy lies south of the Alps. It embraces the low plain of the Po—the middle peninsula of Southern Europe, mostly table-land traversed by the Apennines—and the large islands of Sicily and Sardinia. The people are of the Romanic stock and the Roman Catholic faith; they are distinguished for their love of music, sculpture, and painting.

Productions, etc.—Tropical fruits mingle with the productions of the warm-temperate regions. The plain of the Po contains the chief rice-fields of Europe; and Sicily, "the granary of Italy," yields excellent wheat. The olive (*see engraving, p. 92*) attains its perfection in Italy. More raw silk is produced than in any other European country; some is kept for manufacture at home (Mil'an being specially noted for its silks, velvets, and ribbons), while large quantities are exported to France.

The shores of the Mediterranean abound in sponge and coral, as well as in the tunny, the sardine (so called from Sardinia), and other fish.

Italy furnishes the finest statuary marble. In the north, manufactures receive attention. The silks, artificial flowers, straw hats, and musical instruments of Italy, are much esteemed, and with fruits, olive-oil, wine, and sulphur, are exported. Cotton and woolen goods are made for home use. Ship-building is carried on at Gen'oa, now the leading seaport of the kingdom. Italy has many merchant-vessels, and maintains an extensive commerce.

Cities.—ROME, the capital of Italy, is the world's art-center. As the capital of the ancient Romans, who ruled all nations, it was the most noted city of antiquity, and it is full of splendid ruins which attest its former glory. Rome is the residence of the Pope, the head of the Roman Catholic Church, whose palace is called the Vatican; it contains, in St. Peter's Cathedral (*see engraving above*), the grandest ecclesiastical structure in the world.



SOUTHERN AND PART OF CENTRAL EUROPE

Naples, the largest city of Italy, is renowned for its beautiful bay. Among its varied manufactures, macaroni and vermicelli, which are made of flour and form the principal food of the people, are the most important. Turin and Florence, each of which cities was for a time the capital, are famous for their works of art. Venice, once the leading commercial city of the world, is built on a group of small islands; here canals take the place of streets, and boats of carriages.

Previously to 1859, Italy was divided among a number of separate states. In that year Victor Emmanuel, King of Sardinia, succeeded in annexing several of these states to his own dominions; and, carrying out the work thus begun, in 1870 he became the king of a united Italy, and made Rome the national capital.

Map Questions.—Bound Italy. Are its boundaries mainly natural or artificial? Describe the Apennines. The River Po. The Adriatic Sea. The Gulf of Taranto (*tah'rahn-to*). The Strait of Messina (*mes-se'nah*). Cape Spartivento. The Gulf of Gen'oa. The Lipari (*lip'a-re*) Islands. What three volcanoes belong to Italy? Where is Elba, at one time the place of Napoleon's imprisonment? How is Leghorn situated? Point toward Rome. Where is San Marino, and what can you say of it? Which is farther north, Naples or New York?

Bound the Austro-Hungarian Monarchy. In what part of this empire is Hungary? Bohemia? Galicia? The Tyrol (*tir'rol*)? What part of the empire consists of lowlands? Name the chief mountains. The principal rivers. Where is Prague, noted for containing the first university established in Germany?

AUSTRO-HUNGARY.

How composed.—The Austro-Hungarian Monarchy belongs partly to Southern, and partly to Central, Europe. It embraces peoples of different descent, languages, and sympathies; the Teutonic element prevails in the west, the Slavonic in the east and south, while the Hungarians, or Magyars (*mod'jors*), belong to the Mongolian race. Bosnia has been occupied by Austria since the Russo-Turkish War, which terminated in 1878.

The Austro-Hungarian Monarchy covers a larger part of Europe than any other country except Russia, and in population differs little from France. Its sovereign is Emperor of Austria and King of Hungary. The two countries have a common army and navy, but different parliaments and laws.

Agriculture is the principal pursuit. In the north, where the winters are cold, wheat, barley, and flax, are the staples. In the central and southern parts, these give place to maize, the vine, and the olive. As a wine-producing country, Austro-Hungary is second only to France.

Minerals.—Manufactures.—No country of Europe surpasses Austro-Hungary in mineral wealth. No useful metal, except platinum, is wanting. The beds of coal are inexhaustible. The largest and most profitable salt-mine in the world is in Galicia.

Manufacturing industry is restricted mainly to the western section. Cotton and woolen goods, linens, silks, metallic wares, the glass-ware of Bohemia, and the leather-work and musical instruments of Vienna, are among the chief manufactures.

Constantinople: Mosque of St. Sophia.

Commerce.—The foreign commerce is mainly with Germany and Turkey. Trieste, the leading seaport, is the great emporium of Austrian commerce on the Mediterranean. The Danube, navigable for 800 miles within the limits of the monarchy, is an important highway for domestic trade.

Cities.—Vienna, the capital of the entire monarchy, is the third city of Europe in population. Buda-Pesth, the capital of Hungary, ranks next to Vienna in importance.

ROUMANIA: THE PRINCIPALITIES.

Political Condition.—Roumania, which was made a kingdom in 1881, and the Principalities of Servia and Montenegro, were formerly tributary to Turkey, but became independent in 1878, after the Russo-Turkish War. Bulgaria (*bōōl-gay're-a*), though it is self-governing, is still tributary to Turkey.

Productions, etc.—These countries for the most part have a warm climate and a fertile soil. They produce grain, tobacco, wine, and fruits, in abundance. In Servia and Bulgaria, many horses, cattle, and swine, are raised.

Bucharest, which carries on a considerable trade in grain, timber, and wool, is the capital of Roumania. Belgrade', a strongly fortified city, is the capital of Servia; Cettigne (*chet-teen'yay*), of Montenegro; Sophia (*so-fe'a*), of Bulgaria.

Map Questions.—Name the three Principalities. In what direction from the Danube are they? Which are the best situated for commerce? Why? Bound Roumania. In what plain does part of Roumania lie? Which is farther north, Bucharest or Boston? What river separates Roumania from Russia? From Servia? Bound Servia. Bound Montenegro. What mountains separate Bulgaria from Turkey? Bound Bulgaria.

Bound Turkey. Name the bodies of water that border on Turkey. Describe the Strait of Bos'porus. The Strait of Dardanelles (*dar-da-nelz'*). What strait is between Turkey and Italy? What large island in the Mediterranean belongs to Turkey? How is Gallipoli (*gahl-lip'o-le*), which commands the Dardanelles, situated? Salonica (*sah-lo-ne'kah*)? When it is noon at Washington, what is the time at Constantinople? Point toward Constantinople. What makes the position of Constantinople one of great importance?

TURKEY.

Turkey, situated in the southeastern part of Europe, has recently lost much of its territory and power. It is part of the Turkish or Ottoman Empire, which includes dominions in southwestern Asia much more extensive than it now possesses in Europe, besides tributary countries in Northern Africa. The Turks, who belong to the Mongolian race and profess the Mohammedan faith, are the ruling class.

The people of Turkey have suffered much from the effects of bad government, and are behind the rest of Europe in civilization. Till 1876 the government was an absolute monarchy; but in that year a Constitution was granted, and a General Assembly, consisting of two Houses, was established.—The Turks were a fierce people who crossed into Europe from Asia; they captured Constantinople, then the rich capital of the Eastern Empire, in 1453, and for a time threatened to subjugate Europe.

General Description.—Agriculture is rudely conducted; yet the fruitful soil yields good crops of maize, wheat, rice, tobacco, fruits, and cotton. Domestic animals, including the goat, are abundant. There are mines and marble-quarries, but they are not worked to advantage. Various articles are manufactured for home use; also silks, leather-goods, carpets, wine, and prune-brandy, for export. From the flowers of the famous rose-gardens about Adrianople, is produced the costly *attar* or oil of roses.

Constantinople, the capital of the Ottoman Empire, has a commanding situation and a magnificent harbor. Among its numerous mosques, or places of Mohammedan worship, that of St. Sophia (*see engraving on p. 91*) is especially celebrated. Adrianople is important for its manufactures; Salonica, for its commerce.

Questions.—Where does Italy lie? What does it embrace? Give an account of the people; the productions; manufactures; exports; commerce. In what do the shores of the Mediterranean abound? Describe the capital of Italy. What is said of Naples? Of Turin and Florence? Of Venice? When and how was the present kingdom of Italy formed? What are embraced in the Austro-Hungarian Monarchy? How does this monarchy rank in size and population? Give an account of its agricultural products; minerals; manufactures; commerce. What is the capital of the entire monarchy? Of Hungary?

Name the Principalities of Southern Europe. Describe them, and mention the capital of each. Of what empire is Turkey a part? What are included in this empire? What is the condition of the people? What is the government? State what you can about the Turks in former times. About agriculture in Turkey. About manufactures. What is the capital of the empire? What other cities are mentioned?

GREECE.

General Description.—Greece embraces most of the eastern peninsula of Southern Europe, together with the Ionian Isles on the Mediterranean coast, and numerous islands in the Archipelago. The Gulf of Corinth deeply indents the western coast, almost making an island of southern Greece—the modern Morea (*mo-re'a̭*) and ancient Peloponne'sus. The present kingdom dates from 1832, the people after an heroic struggle having freed themselves from the Turkish yoke, by which they had been oppressed.

Twenty-three centuries ago, Greece was the leading country of the world in civilization, literature, and art. Its present condition offers quite a contrast to its past. The soil would yield all the products of the warm-temperate regions in profusion, yet agriculture is neglected. Manufactures are few. The rich mineral deposits, except those of lead, are left undeveloped. Brigands infest the mountains.

Olive-Harvest in Southern Europe.

Much of the grain-trade of the Black Sea and the Levant' (the eastern Mediterranean) is in the hands of the Greeks. Of the exports, dried "currants" (the small seedless grapes of Corinth) are the most important; olive-oil, lead, figs, and the skins of the sheep and goats reared on the mountains, are next in value.

Ath'ens, the pride of ancient Greece, and still full of monuments of its former greatness, is the capital and metropolis. Syra (*se'rah*), on an island of the same name in the Archipelago, is the chief commercial town, and a stopping-place for steamers on their way to and from Constantinople.

Map Questions.—(*See map, p. 90.*) Bound Greece. What cape is at its southern extremity? Describe the situation of the Ionian Isles. Name some of them. In what direction is Spain from Greece? Which of these countries extends farther south? Bound Spain. What separates Spain from Africa? How is Gibraltar situated? To what country does Gibraltar belong? What makes the situation of Gibraltar important? Name two islands in the Mediterranean Sea that belong to Great Britain.

Name the chief mountains of Spain. What is their general direction? Name the highest peak of the Pyrenees. How is Andorra situated? What is Andorra? Name the chief river of Spain that flows into the Mediterranean. Describe the Guadalquivir (*gaw-da̭l-kwiv'ḙr*). Mention the chief Spanish ports on the Mediterranean. Where is Ca'diz, noted for the export of Sherry wine? Bound Portugal. What rivers cross Portugal? Describe the Ta'gus.

SPAIN AND PORTUGAL.

General Description.—Spain and Portugal occupy the western peninsula of Southern Europe. They resemble each other in their products, which consist of fruits, wine, the grains (including rice), the olive, the mulberry, etc. Their people are of the same stock (the Romanic), speak kindred languages, and profess the Roman Catholic faith.

Spain contains great mineral wealth—iron-ore (shipped in large quantities to Wales), lead, quicksilver, and copper. Her Andalusian horses and merino sheep are celebrated. No country is better situated for commerce, and Spain was once noted for maritime enterprise; but foreign commerce has greatly diminished, and internal trade suffers from the want of good roads. Wines, raisins, wool, metals, oranges, and cork, are among the exports.

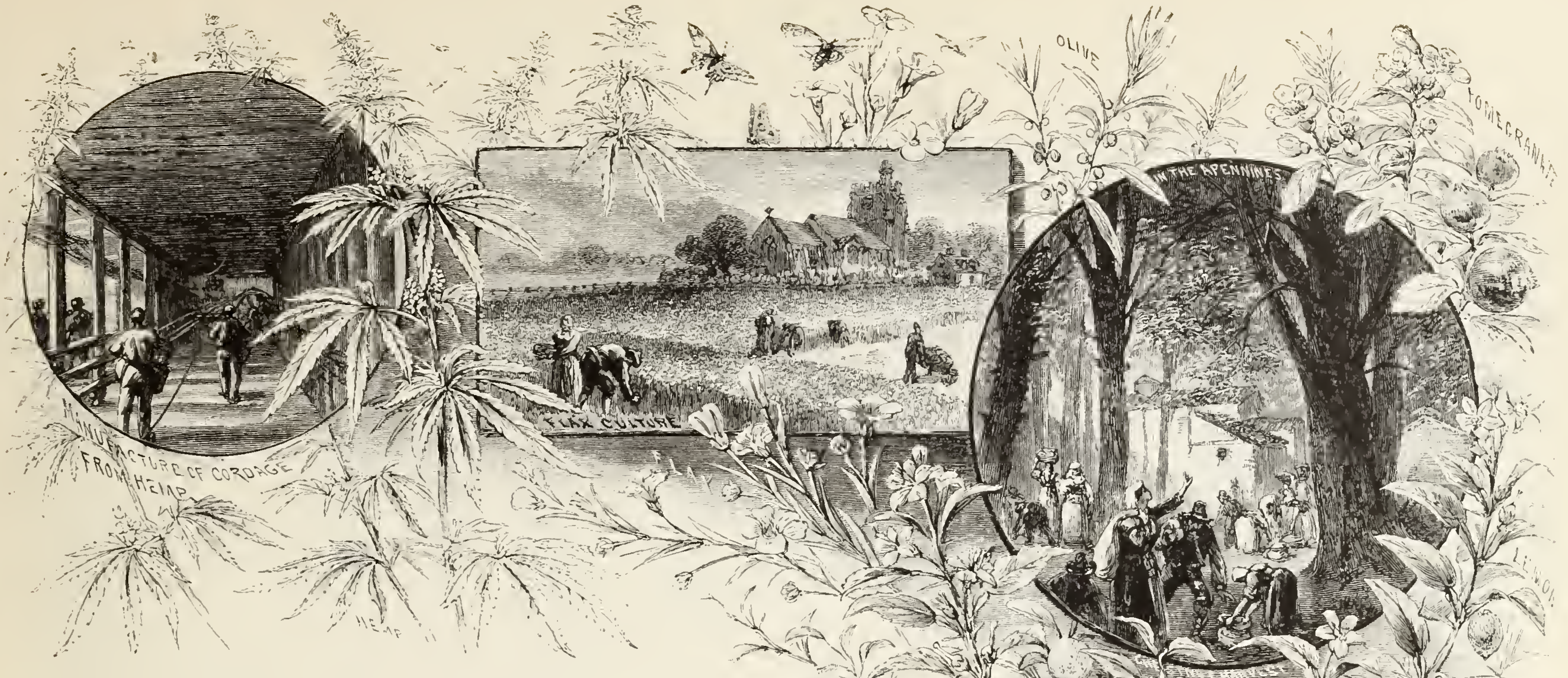
Madrid', the capital, is distinguished for its magnificent palace and the largest art-collection in the world. Barcelo'na, the second city of the kingdom, is the seat of various manufactures (silks, woolens, cottons, etc.), and of an active coast-trade. Sev'ille and Valencia, manufacturing and commercial cities, contain extensive tobacco-factories. Mal'aga is noted for its wine and raisins.

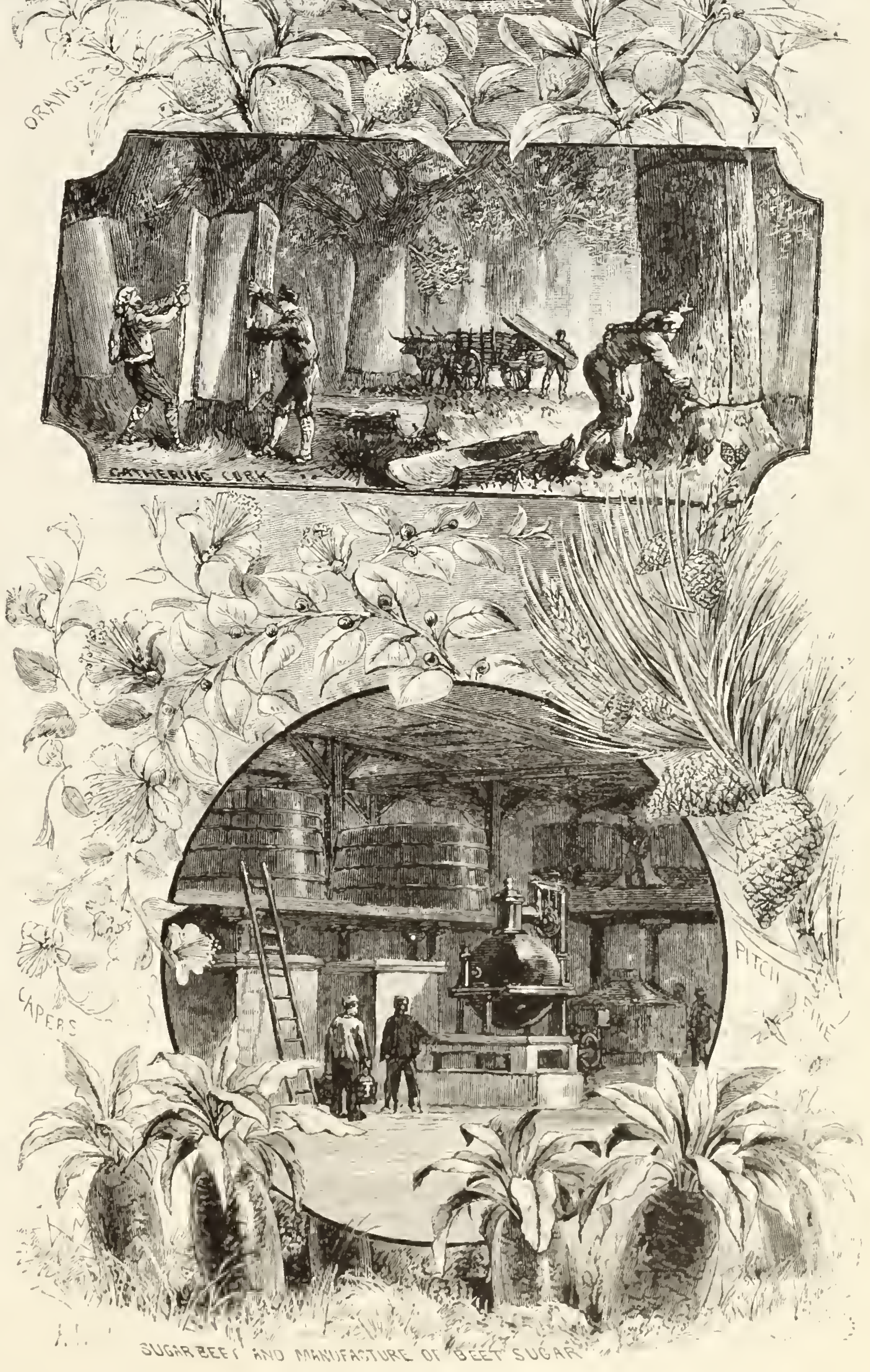
To Spain belong the Canary Islands in the Atlantic, the Balearic Isles in the Mediterranean, Cuba and Porto Rico in the West Indies, several groups in Oceania, and islands off the western coast of Africa.

Portugal, like Spain, exports wine and fruits in great quantities. Grain, salted provisions, iron, steel, etc., are imported. Ship-building is carried on to some extent.

Lisbon, the capital, has a fine harbor and is the principal commercial city. O*porto* is the shipping-point for *port* wine.

Among the possessions of Portugal are the Madeira Islands, the Azores, the Cape Verd Islands, and settlements in Africa and India.





SOME INDUSTRIES OF EUROPE.

Description of the Engraving.

Flax, the blossoms and culture of which are shown above, has been extensively raised for the manufacture of linen, from the earliest times. Three and a half millions of acres are devoted to its cultivation in Europe, Russia alone yielding one-half of the total produce of the world.

When the crop begins to ripen, the stalks are pulled up by the roots ; and the bolls, containing the flax-seed, are carefully removed by a "rippler", or comb with iron teeth. The rippled stalks are then tied in bundles and submerged in water, or spread on the grass and exposed to rain and dew, in order to induce fermentation, which renders the fibers easily separable from the woody core. This separation is effected in *scutching*-mills ; the flax is then cleansed and spun into yarn, which is woven into linen.

Hemp is cultivated principally in Russia and Germany. It is used in the manufacture of cordage and coarse cloths. The stalks are cut in autumn, dried for a few days in the sun, and then rotted in vats of water or by exposure to dew. The fibers are thoroughly *scutched* as in the case of flax, and packed in bales for market. The seeds, which are rich in oil, are used as food for poultry, and are roasted and eaten on bread by the Russian peasants.

In the engraving is shown a "rope-walk", where rope and cables are manufactured. The fibers of the hemp are spun into yarns. These are passed through boiling tar, or, if white rope is to be made, are taken directly to the "laying-ground". Here the yarns are united in strands, and these are twisted into rope of the required size by machinery or by hand.

Farina dolce (*fah-re'nah dol'chay*) is a pink flour manufactured from the dried kernels of the sweet Italian chestnut. The October chestnut-harvest is a great gala-season in the Apennines. Merry parties fill the woods in search of the fallen nuts, and the schools are closed for a month that the children may take part in the gathering. Through the forests are scattered drying-houses, where the fresh nuts are exposed to heat and smoke for several days. The blackened shells are then stripped off, and the kernels are taken to a mill to be ground. From the flour are made bread, porridge, and cakes.

The sweet chestnut is largely used as food by the poorer classes, not only in Italy, but also in Spain, Switzerland, and Germany.

Cork is the outer layer of the bark of an evergreen oak peculiar to Southern Europe, and largely cultivated in Spain and Portugal. The tree is not subjected to the operation of *barking* (shown in the engraving) till it has attained the age of fifteen or twenty years ; after which it is regularly stripped every eight or ten years, each time yielding a finer quality of cork. It continues to be productive for more than a century ; but, if the bark is not thus removed, it seldom exceeds the age of fifty years.

Manufacture of Beet-Sugar.—The beets are transported from the fields as carefully as possible, so that they may not be bruised. The roots are then thoroughly cleansed, and crushed. The pulp is next subjected to pressure for the extraction of the juice. This is collected in tanks, passed into huge copper kettles (see upper right-hand corner of engraving), and cleared by boiling it with lime. After filtration through bone-black, it is evaporated in vacuum-pans heated by steam-coils (see closed iron vessel in the center) ; and, as the concentrated juice cools, crystals of sugar are formed.

Most of the sugar consumed in Europe is thus made from the beet-root. In France, 5,000 pounds to the acre is not an uncommon yield.

REVIEW OF EUROPE: STATISTICAL SUMMARY.

Country.	Area in sq. miles.	Population.	Miles of Railroad.	Capital and largest City.*	Name of Nation.	Prevailing Stock.	Government.	Prevailing Religion.
Great Britain and Ireland	121,608	35,246,633	17,945	London (3,814,571)	British	Teutonic and Celtic	Limited monarchy. King or Queen: Parliament, consisting of House of Lords and House of Commons	Protestant and R. Cath.
England	50,922	24,608,391	12,660	London	English	Teutonic		Ch. of England.
Wales	7,398	1,359,895		Merthyr Tydfil, *l. c.* (48,857).	Welsh	Celtic		Protestant.
Scotland	30,463	3,734,441	2,907	Glasgow, *l. c.* (511,532)	Scotch	Teu. and Celtic.		Presbyterian.
Ireland	32,531	5,159,839	2,378	Dublin, *l. c.* (338,579)	Irish	Celtic		R. Catholic.
Sweden	170,979	4,567,300	3,642	Stockholm (169,429)	Swedes	Teutonic	Limited monarchy.	Protestant.
Norway	122,860	1,806,900	820	Christiania (76,866)	Norwegians	Teutonic		Protestant.
Russia	2,177,990	76,385,000	15,375	St. Petersburg (667,963)	Russians	Slavonic	Absolute monarchy	Greek church.
German Empire	208,431	45,194,172	22,045	Berlin (1,122,360)	Germans	Teutonic	Limited monarchy	Protestant.
Denmark	14,789	2,099,400	977	Copenhagen (234,850)	Danes	Teutonic	Limited monarchy	Protestant.
Holland	12,731	4,060,580	1,180	Hague; Amsterdam, *l. c.*	Dutch	Teutonic	Limited monarchy	Protestant.
Belgium	11,373	5,536,654	2,550	Brussels (170,345)†	Belgians	Teutonic, mixed.	Limited monarchy	R. Catholic.
France	204,092	36,905,788	16,223	Paris (2,225,916)	French	Celtic, mixed	Republic	R. Catholic.
Switzerland	15,981	2,846,102	1,635	Berne; Geneva, *l. c.*	Swiss	Teu. and Celtic.	Republic	Protestant.
Italy	114,415	28,437,091	5,139	Rome (289,321); Naples, *l. c.*	Italians	Romanic	Limited monarchy	R. Catholic.
San Marino	24	7,816	....	San Marino (6,000)	San Marinians	Romanic	Republic	R. Catholic.
Austro-Hungary	241,034	37,741,434	11,645	Vienna (1,103,857)	Austrians	Sla., Teu., Mong.	Limited monarchy	R. Catholic.
Roumania	49,262	5,376,000	884	Bucharest (177,646)	Roumanians	Romanic, Slav.	Limited monarchy	Greek church.
Servia	18,787	1,700,211	....	Belgrade (27,605)	Servians	Slavonic	Limited monarchy	Greek church.
Montenegro	3,487	286,000	... .	Cettigne; Antivari, *l. c.*	Montenegrins	Slavonic	Absolute monarchy	Greek church.
Bulgaria	24,659	1,995,701	140	Sophia; Rustchuk, *l. c.*	Bulgarians	Slavonic, mixed.	Limited monarchy	Greek church.
Turkey	81,900	5,375,000	888	Constantinople (600,000)	Turks (ruling)	Mong., mixed	Limited monarchy	Moham., Grk. ch.
Greece	23,253	2,067,775	7	Athens (68,374)	Greeks	Romanic	Limited monarchy	Greek church.
Spain	196,037	16,623,384	3,843	Madrid (367,284)	Spanish	Romanic	Limited monarchy	R. Catholic.
Portugal	34,606	4,745,124	776	Lisbon (233,389)	Portuguese	Romanic	Limited monarchy	R. Catholic.
Andorra	191	18,000	....	Andorra (1,000)	Andorrese	Romanic	Republic	R. Catholic.

* If the capital is not also the largest city, the name of the latter, followed by the letters *l. c.*, is given after the name of the capital. † With suburbs, 399,936.

GENERAL QUESTIONS.

Table.—Name the countries of Europe, with their capitals. Which is the largest country? Which stands first in population? Which, second? Which has the most miles of railroad? Which capitals are also the largest cities in their respective countries? Name the nations that belong mainly to the Teutonic stock. To the Celtic. To the Slavonic. To the Romanic. Which countries are limited monarchies? Absolute monarchies? Republics?

Countries.—Name the five great powers of Europe. *Great Britain, the German Empire, Russia, France, and Austria.* Mention the three leading manufacturing countries of Europe. What three countries take the lead in commerce? *Great Britain, the German Empire, and France.* What country is noted for its fisheries? For its fairs? For its production of raw silk? For its manufacture of silk? For its flax? For its grand scenery? For building iron ships?

From what part of Europe does the United States import wines, olive-oil, and tropical fruits? From what country does it import dried "currants"? Cork? Port wine? Sherry wine? Cotton and woolen goods? Silk dress-goods, laces, ribbons, etc.? *France.* Statuary marble? *Italy.* From what countries does it import linens? *Great Britain, the German Empire, and Holland.*

Cities.—What city is the commercial metropolis of Europe? What city takes the lead in taste and fashion? What city is the great art-center? Name the chief cotton-importing seaport of England. *Liv.* The principal seaport of Scotland. Of Ireland. Of Germany. Of France. Of Austria. Of Turkey. Of Greece. The chief grain-port of Russia. Of Germany.

Minerals.—Is Europe richer in the precious or in the useful metals? Which countries contain the most metallic wealth? *Austria, Germany, and Spain.* What two countries produce the most coal? *England and Belgium.* The most iron? *England and the German Empire.* What country produces iron of superior quality? What two countries produce the most lead? *England and Spain.*

Commerce.—What has contributed to make England the leading commercial country? Under what disadvantages does Switzerland labor, as regards commerce? What city is the chief shipping-point of northern Italy? *G.* Which rivers of the "Continent" are the most important commercially? *The Volga, the principal channel of trade in Russia, and the Danube with its hundred navigable tributaries.*

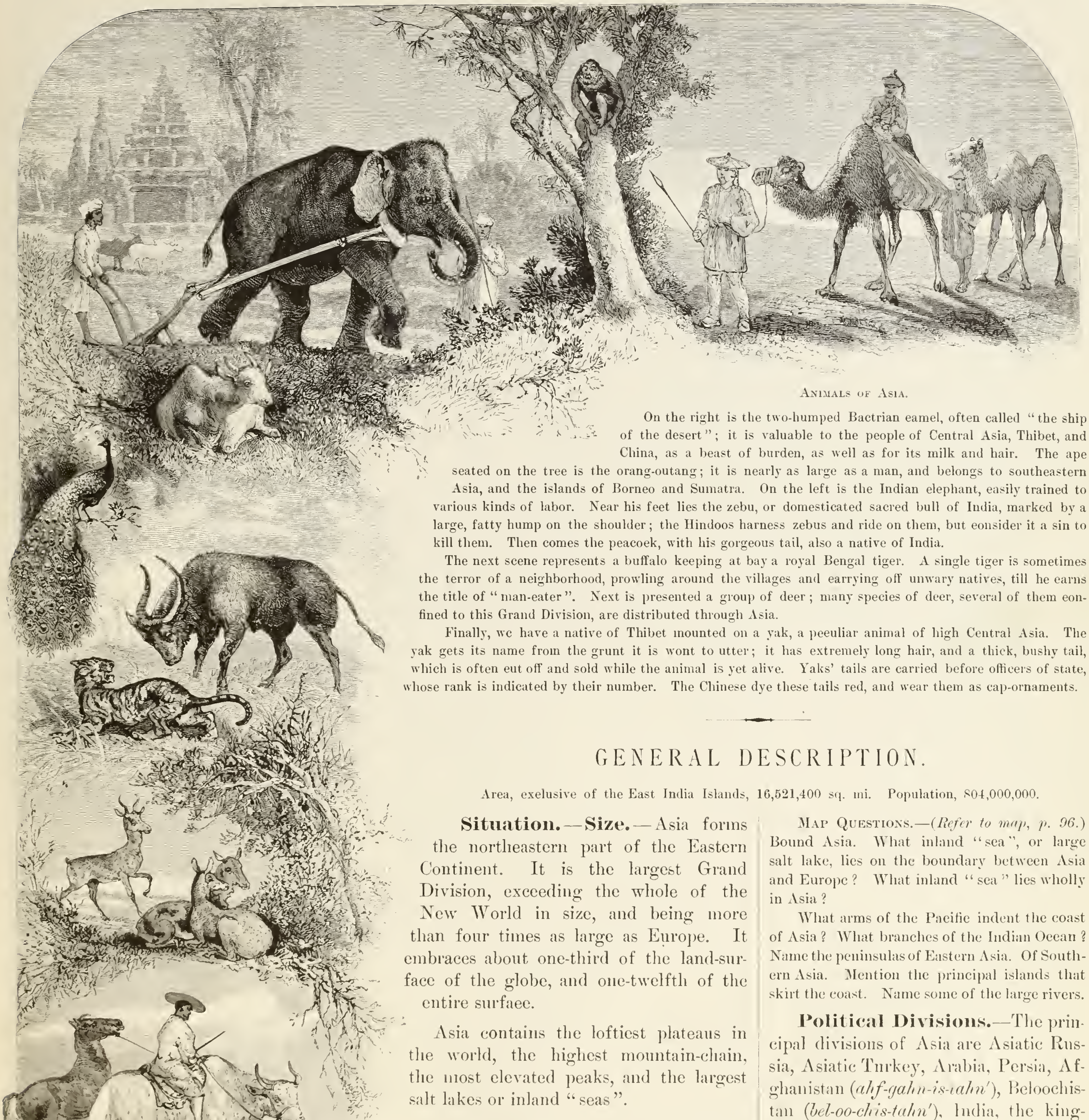
How is much of the internal trade of France carried on? *By means of canals; the Rhone is connected by canals with the Rhine, the Seine, and the Loire.* Which rivers are most important to the commerce of Germany? *The Rhine, Oder, Vistula, and Elbe.* Which is the most important river of Italy?

Travels.—For what African ports can a traveler embark at Marseilles? In what two ways can one go from Genoa to Naples? *By steamer or by railroad.* In going by railroad, through what places would one pass? What mountains are crossed in going from Florence to Venice? In traveling by railroad from Vienna to Berlin, through what city of Bohemia would you pass? Through what capital? What mineral springs of Germany are much visited by travelers? *Those of Baden (bah'dẹn), Wiesbaden (wees'bah-dẹn), and Ems.*

Miscellaneous.—Which country of Europe is nearest to Africa? To North America? Name the principal islands of the Mediterranean, and state to what country each belongs. What is the largest lake of Europe? The largest river? The highest mountain? The highest peak of the Alps? What two ranges belong partly to Europe and partly to Asia? For what is the Bay of Biscay noted? *Its heavy seas.*

Where is the Morea? What two countries of Southern Europe were anciently noted for their power and culture? What is the Levant? Mention the chief cities of Spain. Of Portugal. Mention some of the foreign possessions of Spain. Of Portugal. Of France. Of Holland. Of Great Britain. What two cities are on opposite sides of the Strait of Dover? Name the three most southerly states of the German Empire. How is Alsace-Lorraine situated?

ASIA.



Animals of Asia.

On the right is the two-humped Bactrian camel, often called "the ship of the desert"; it is valuable to the people of Central Asia, Thibet, and China, as a beast of burden, as well as for its milk and hair. The ape seated on the tree is the orang-outang; it is nearly as large as a man, and belongs to southeastern Asia, and the islands of Borneo and Sumatra. On the left is the Indian elephant, easily trained to various kinds of labor. Near his feet lies the zebu, or domesticated sacred bull of India, marked by a large, fatty hump on the shoulder; the Hindoos harness zebus and ride on them, but consider it a sin to kill them. Then comes the peacock, with his gorgeous tail, also a native of India.

The next scene represents a buffalo keeping at bay a royal Bengal tiger. A single tiger is sometimes the terror of a neighborhood, prowling around the villages and carrying off unwary natives, till he earns the title of "man-eater". Next is presented a group of deer; many species of deer, several of them confined to this Grand Division, are distributed through Asia.

Finally, we have a native of Thibet mounted on a yak, a peculiar animal of high Central Asia. The yak gets its name from the grunt it is wont to utter; it has extremely long hair, and a thick, bushy tail, which is often cut off and sold while the animal is yet alive. Yaks' tails are carried before officers of state, whose rank is indicated by their number. The Chinese dye these tails red, and wear them as cap-ornaments.

GENERAL DESCRIPTION.

Area, exclusive of the East India Islands, 16,521,400 sq. mi. Population, 804,000,000.

Situation.—Size.—Asia forms the northeastern part of the Eastern Continent. It is the largest Grand Division, exceeding the whole of the New World in size, and being more than four times as large as Europe. It embraces about one-third of the land-surface of the globe, and one-twelfth of the entire surface.

Asia contains the loftiest plateaus in the world, the highest mountain-chain, the most elevated peaks, and the largest salt lakes or inland "seas".

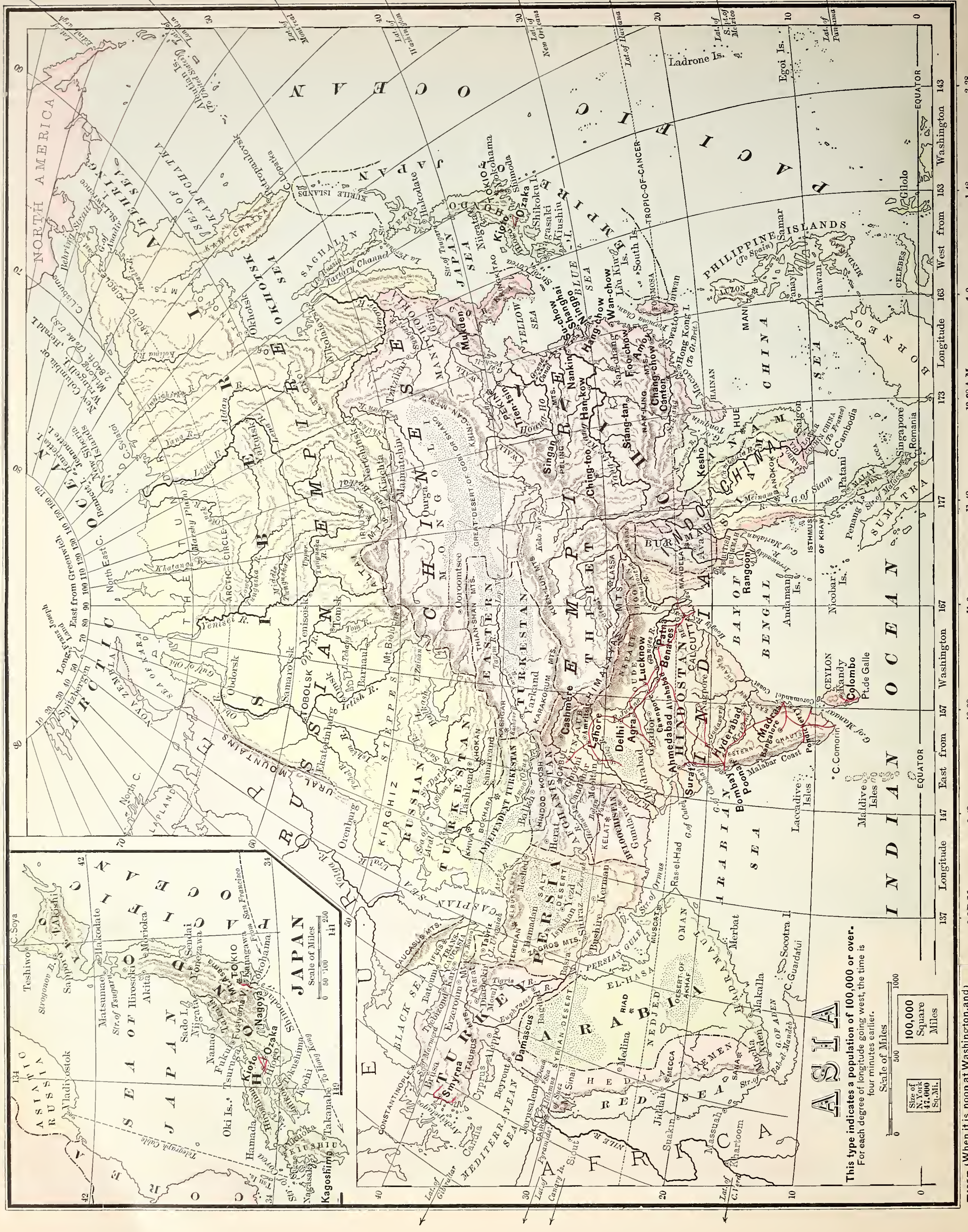
Coast-line.—Asia is very irregular in outline. The eastern coast is indented by numerous arms of the Pacific Ocean; the southern coast, by deep branches of the Indian. The coast-line exceeds 35,000 miles in length.—There is an abundance of safe harbors, which, with large rivers navigable for hundreds of miles, afford facilities for commercial intercourse.

Map Questions.—(*Refer to map, p. 96.*) Bound Asia. What inland "sea", or large salt lake, lies on the boundary between Asia and Europe? What inland "sea" lies wholly in Asia?

What arms of the Pacific indent the coast of Asia? What branches of the Indian Ocean? Name the peninsulas of Eastern Asia. Of Southern Asia. Mention the principal islands that skirt the coast. Name some of the large rivers.

Political Divisions.—The principal divisions of Asia are Asiatic Russia, Asiatic Turkey, Arabia, Persia, Afghanistan (*ahf-gahn-is-tahn'*), Beloochistan (*bel-oo-chis-tahn'*), India, the kingdoms of Indo-China, the Chinese Empire, and the Empire of Japan.

Asiatic Russia and Asiatic Turkey are parts respectively of the Russian and the Turkish Empire. British India is a dependency of Great Britain. The other states are absolute monarchies.—In what part of Asia is each of the divisions named above?



ASIA

This type indicates a population of 100,000 or over.
For each degree of longitude going west, the time is four minutes earlier.

TIME {When it is noon at Washington, and 5 hours 8 min. P.M. at Greenwich.}

People.—Asia contains more inhabitants than all the rest of the world. It was the seat of early civilization, and of two of the great empires of antiquity, the Assyrian and the Persian. The most progressive nations have sprung from tribes which in very early times made their way from Asia into Europe; but the communities that remained in Asia, instead of making progress, have either remained stationary or sunk to the half-civilized or the barbarous state.

Among the Asiatics, three of the great races are represented: the Caucasian, to which the Hindoos, Afghans, Persians, Arabians, and a large part of the people of Turkey, belong; the Malay, embracing the inhabitants of the Malay Peninsula; and the Mongolian, which includes far the greatest number—the Chinese, the Japanese, the Turks, and the native tribes of Northern and Central Asia.

Religion. — The leading religious systems all originated in Asia. The Christian and the Jewish religion are there represented at the present day by comparatively few followers. Of Mohammedans, nearly one-half of the entire number is in Asia, India alone containing about 50,000,000; but Brahmanism and Buddhism, the two leading Pagan religions, have the most adherents—the former, 175,000,000—the latter, 340,000,000.

Brahmanism, which has its seat in Hindostan, inculcates a belief in Brahma, "the soul of the universe," and in the "thrice eleven" gods of the Ve'das, or ancient books of India, regarded by the people as inspired. Among the distinguishing features of this religion are the doctrine of the transmigration of the souls of men into the inferior animals, and the division of the people into four distinct castes (Brahmans, soldiers, farmers, and laborers), separated from one another by impassable barriers.—(*Consult Quackenbos's "History of Ancient Literature," p. 34.*)

The doctrines of Brahmanism are rejected by a large sect of educated Hindoos, who have recently attempted to free the national religion from superstition and idolatry. This sect avows its belief in one God and in the immortality of the soul, respects the Bible, and regards Christ as the wisest of prophets, but denies his divinity.

Buddhism, the religion of China, Thibet (*tib'et*), Indo-China, Japan, and Ceylon, derives its name from Buddha, who, in the fifth century before Christ, introduced a simpler faith to take the place of Brahmanism. Buddhism enjoins charity toward all men and the conquest of self, but practices the most abject idolatry. The head of this religion, the Grand La'ma, believed by his followers to be the incarnate Buddha, resides at Lassa, in Thibet, where in a gorgeous temple he is worshiped by crowds of devotees.

Questions.—How is Asia situated? Give an idea of its relative size. For what is it distinguished? Describe its outline. How long is its coast-line? By what is the mainland skirted? What advantages for commerce has Asia? Mention the principal political divisions of Asia. Of what is Asiatic Russia a part? Asiatic Turkey? Of what is British India a dependency? What is the government of the other states?

How does Asia rank in population? Of what was it anciently the seat? What kind of nations have sprung from bodies that emigrated from Asia to Europe? What is the condition of the communities that remained? What races are represented in Asia, and by what nations respectively? Give an account of the religions that prevail in Asia. Mention some of the distinguishing features of Brahmanism. Of Buddhism. Describe the belief of a sect of Hindoos engaged in reforming the national religion.

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MAP QUESTIONS ON ASIA.

General Questions.—In what direction is Asia from the equator? From Europe? From North America? What waters separate it from North America? What cape is nearest to North America? How wide is Behring Strait at that point? What tropic and what polar circle cross Asia?

In what part of Asia does the longest day in midsummer exceed twenty-four hours? What is the northernmost part of Asia that ever has the sun directly overhead? In what zones is Asia? In what zone is New Columbia, or Wrangell Island, a recently annexed possession of the United States?

Latitude, etc.—What is the northernmost point of Asia? In about what latitude is Northeast Cape? What is the southernmost point of Asia? How many degrees from the equator is Cape Roma'nia? What part of Asia is in the latitude of London (*see margin*)? What cities are in nearly the same latitude as Washington? As New Orleans?

Divisions.—From what strait on the east to what sea on the west do Russia's possessions in Asia extend? Bound the Chinese Empire. Mention its principal divisions, and state in what part of the empire each is. What divisions of Asia form peninsulas? What countries are included in Indo-China? Bound Persia. Afghanistan. Hindostan.

Islands. — How is Saghalin (*sah-gah-leen'*) situated? Ceylon? Where are the Kurile (*koo'ril*) Islands? The Liu Kiu (*le-oo' ke-oo'*) Islands? What empire embraces the two groups last named? Where is Hainan (*hi-nan'*), called by the Chinese "the Typhoon Mother," on account of the frequent hurricanes in the neighboring waters? Where are the Laccadive Isles? The Maldive? Where is Herald I.?

Mountains. — What mountains separate Thibet from Hindostan? Describe the Himalaya Mountains. What mountains separate the Chinese Empire from Asiatic Russia? How are the Taurus Mountains situated? The Hindoo Koosh? Where is Mount Si'nai? Mount Ararat?

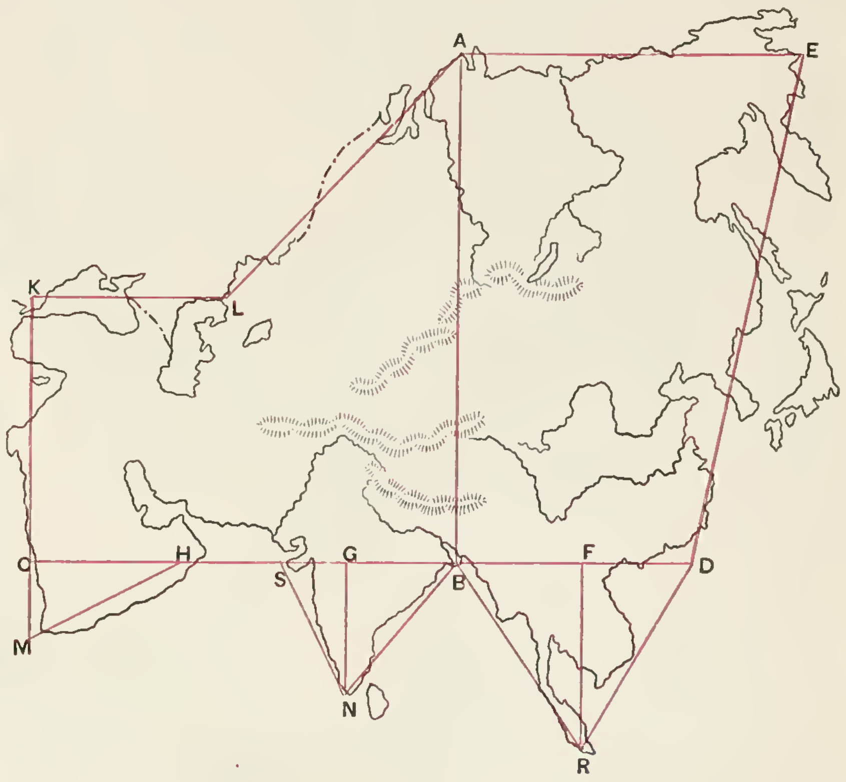
Coast-Waters, etc.—Describe the situation of the Sea of Kara (*kah'rah*). The Gulf of Obi (*o'be*). What river flows into this gulf? Name the two principal rivers that flow into the Arctic Ocean. Describe the Gulf of A'den. The Red Sea. What strait connects them? Describe the Arabian Sea. The Persian Gulf. What strait connects them? Describe the Bay of Bengal (*ben-gawl'*). The Strait of Malacca. The Gulf of Tonquin (*ton-keen'*).

Voyages, etc. — On what waters would a ship, after passing through the Isthmus of Suez in the Suez Canal, sail to Calcutta? From Calcutta, on what waters would you sail to the capital of Japan? What cities of Hindostan are connected by railroads? When it is noon at Washington, in what part of Asia is it midnight? How is this part of Asia situated, relatively to Washington? Describe the Brahmapootra River. The Irrawaddy River.

◆

DIRECTIONS FOR DRAWING THE MAP.

Draw the vertical line A B = 3,670 mi.
Draw the horizontal lines A E = 2,530 mi., B D = 1,700 mi., and B C = 3,100 mi.
Take B F = 870 mi., B G = 820 mi., G S = 440 mi., and S H = 725 mi.
Draw the vertical lines F R = 1,380 mi., G N = 930 mi., C M = 550 mi., and C K = 1,925 mi.
Draw the horizontal line K L = 1,400 mi.
Draw E D, D R, R B, B N, N S, H M, and A L.



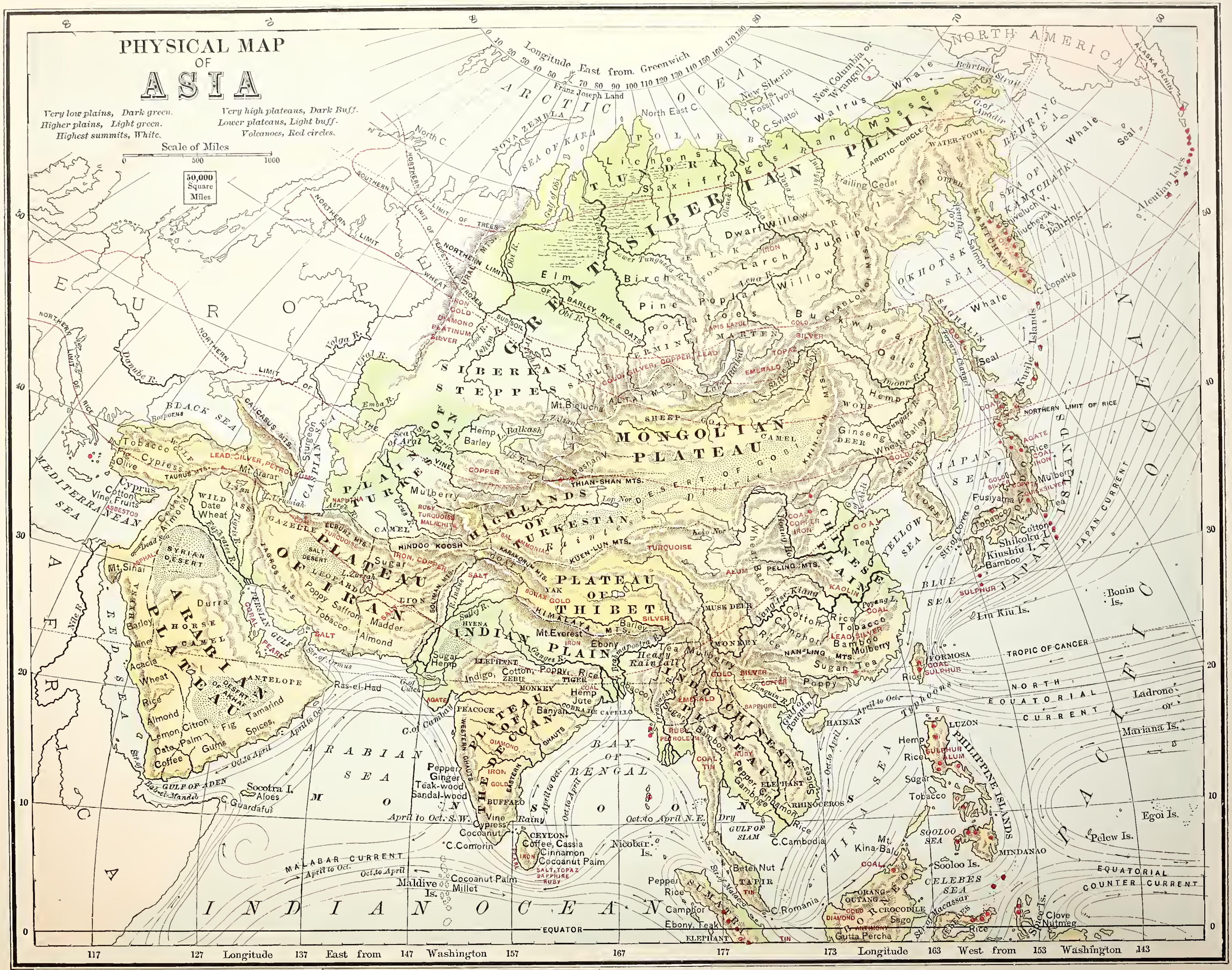
Sketch the outline. Insert the Himalaya and the Altai (*ahl-ti'*) Mountains; the Rivers Obi, Yenisei (*yen-e-say'e*), Ganges, and Indus, the Hoang-Ho, and the Yang-tse-Kiang; the Black and Caspian Seas, and the Sea of Ar'al; the Japan Islands, Saghalin, and Ceylon.

PHYSICAL MAP OF ASIA

Very low plains, Dark green. Very high plateaus, Dark Buff.
Higher plains, Light green. Lower plateaus, Light buff.
Highest summits, White. Volcanoes, Red circles.

Scale of Miles 0 500 1000

50,000 Square Miles



PHYSICAL DIVISIONS AND FEATURES.

SURFACE.

Central and Northern Asia.—(*Refer to the opposite map.*) Central Asia, the highest part of the Grand Division, consists of plateaus traversed by lofty mountain-chains. The Plateau of Thibet is the most elevated region inhabited by man, being higher in parts than the top of Mont Blanc.

This plateau is bounded on the south by the loftiest mountain-range on the globe, the Himalayas, having Mount Everest (29,002 feet) for their culminating peak. On the north, the Kuen-Lun (*kwen-loon'*) chain separates it from the Highlands of Turkestan, which are continued to the northeast in the Mongolian Plateau.

Along the northern margin of the latter, extend the Altai Mountains. Their northern slopes merge in a lower plateau, which in turn descends to the Great Siberian Plain; and this extends along the whole of northern and northwestern Asia, terminating in the southwest in the Plain of Turkestan.

On the east, the Plateau of Thibet descends to a lower table-land, intersected by several mountain-ranges, which extend to the Chinese Plain.

Southern Asia.—The southern peninsulas of Asia consist mainly of table-lands of moderate elevation. The Plateau of the Deccan is separated from the Plateau of Thibet by the low Indian Plain, which embraces part of the Ganges Valley. South of the Hindoo Koosh and Elburz Mountains is the Plateau of Iran (*e'rahn*), continued in table-lands reaching to the Black and Mediterranean Seas.

Map Questions.—What two rivers, rising in the Taurus Mountains, flow through a low plain to the Persian Gulf? What mountain-chains nearly surround the Plateau of Iran? The Mongolian Plateau? What three countries are included in the Indo-Chinese Plateau? In what parts of Asia are volcanoes? Where are the Siberian Steppes? Where is the frozen marsh called the Tundra? What is remarkable about the Caspian Sea and the adjacent region on the north? *They are lower than the level of the ocean.*

What deserts are in Asia, and how is each situated? In what direction does the desert belt extend? Do any rivers rise in the deserts? Why not? How do you account for the great desert region of Central Asia? *It is rainless, being surrounded by mountains, which deprive the winds of their moisture before they reach it.* What is the direction of the principal mountain-ranges? Is this in accordance with the general law? Name two mountain-ranges of China.

DRAINAGE.

Rivers.—Asia contains many large rivers, distinguished by great length, rather than by having extensive basins or numerous tributaries. Rising mostly in the central highlands, and following different slopes, they form four systems; these consist of,

I. The rivers that flow into the Arctic Ocean and its arms: these streams, while large, are frozen during much of the year, and are comparatively unimportant for commercial purposes. II. The rivers that flow into arms of the Pacific Ocean; these are of the greatest importance as seats of internal commerce. III. The rivers that flow into arms of the Indian Ocean. IV. The rivers that flow into inland bodies of water.

Lakes.—The Caspian Sea and the Sea of Ar'al seem once to have communicated with each other and with the oceanic waters. Now, cut off from the ocean, they are really salt lakes. Both contain sturgeon and seals. Lake Balkash (*bahl-kahsh'*) is also salt. Lake Baikal (*bi'kahl*) is the largest fresh-water lake.

The Caspian fisheries are very profitable; the salted roe of the sturgeon is esteemed a delicacy in Russia, and from the air-bladder of the same fish isinglass is prepared.

Map Questions.—Name the principal rivers of Asia belonging to the Pacific system. Which of these traverse the Chinese Plain? Describe the Amoor (*ah-moor'*) River, navigable throughout its length, except in winter. Mention the chief rivers of the Indian system. Describe the Indus River. The Euphra'tes. Name the most important rivers that flow into inland waters. Describe the Amoo' River. What rivers drain the Indo-Chinese Plateau? How is Lake Baikal situated?

In what sea is the Malabar Current, and how does it flow? Of what is the Japan Current an offshoot? Where have we met with the Japan Current before, and what is its effect?

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CLIMATE.—VEGETATION.—MINERALS.

Climate.—Asia, extending nearly to the equator on the south and beyond the Arctic Circle on the north, has every variety of climate. The Himalayas and the ranges that join them on the east and west, make a marked separation between the tropical countries on the one side and the temperate and cold regions on the other. Extremes of heat and cold mark the climate in the interior.

As regards the amount of rain, great contrasts are presented (*see Rain Map, p. 12*). In no part of the world is the rainfall heavier than in districts of India directly facing the vapor-bearing winds from the Indian Ocean; while the highlands of Central Asia, and extensive tracts in the southwestern plateaus, cut off from the moist winds by mountain-ranges, are entirely rainless.

Vegetation.—In the south the vegetation is tropical, embracing rice, cotton, sugar-cane, coffee, indigo, and spice-trees. Tea and the mulberry are characteristic of the warm-temperate regions in the eastern part. In higher latitudes, the usual grains and fruits of the temperate zones replace those of the tropics; and still farther north vegetation becomes less luxuriant, then sparse, and finally almost entirely disappears.

Minerals.—The metals, as well as the precious stones, are widely distributed through Asia. The slopes of the Ural Mountains yield large quantities of gold, silver, platinum, and iron. The Altai Mountains contain valuable deposits of the precious metals, copper, and lead, though as yet they are but little developed.

Coal and iron are found in China, India, and elsewhere. Lead occurs in China, Siberia, and Turkey; tin, in the Malay Peninsula. Japan is rich in copper, silver, gold, iron, and coal. Hindostan has yielded the finest diamonds. The emerald and the topaz are obtained on the Altai slopes. The Persian Gulf and Ceylon are celebrated for their pearls.

Questions.—Of what does Central Asia consist? Describe the Plateau of Thibet. By what is it bounded on the south? Describe the country on the north. On the east. Describe the peninsulas of Southern Asia, as regards elevation. What countries are embraced in the Plateau of Iran? For what are the rivers of Asia distinguished? What systems do they form? Give an account of the inland seas, or salt lakes. Of the climate of Asia. The rainfall. The vegetation in different parts. In what minerals are the Ural Mountains rich? The Altai Mountains? Where are coal and iron found? Where does lead occur? Tin? What precious stones are found, and where?

Map Questions.—Mention some of the mineral products of Japan. Of the Island of Formo'sa. Where is petroleum found? Salt? What parts of Asia, besides the Ural and Altai slopes, contain gold? Silver? Through what regions does the line denoting the northern limit of wheat pass? The northern limit of rice? The northern limit of the vine?

Where is the opium-producing poppy cultivated? Tobacco? Hemp? Jute? Mention some of the products of Arabia. Of Asiatic Turkey. Of Ceylon. Where are the whale and the walrus taken? Where is the polar bear found? The lion? The gazelle? The yak? The zebu? The elephant? The camel? Where is the favorite home of the tiger?

ASIATIC RUSSIA.

How composed.—To the Russian Empire belongs more than one-third of Asia. This vast domain is made up of Siberia, in the north; Russian Turkestan (*toor-kes-tahn′*), south of western Siberia and extending from the Altai Mountains to the Caspian Sea; and Transcauca′sia, between the Black Sea and the Caspian.

Siberia includes the icy wastes of the far north, where, though there are no glaciers, the ground is perpetually frozen to a great depth, the summer thaw affecting only the surface.

Along this ice-bound coast, the Swedish explorer, Nordenskjöld (*nor′de̤n-shöld*), in 1878-'79, succeeded in making the "Northeast Passage" from the Atlantic Ocean to Behring Strait, though imprisoned in ice for 294 days. It is thought that this northern route, as far as the Le′na River, can be utilized for purposes of trade.

The only inhabitants of northern Siberia are native tribes of the Mongolian race; they wander from place to place, driving their herds of reindeer before them in search of the scanty nourishment which the Tundra affords. Some of these natives carry on an active barter with Russian traders, receiving from the latter tobacco, knives, etc., and giving in exchange furs which they have themselves prepared, or which they have obtained from the Esquimaux by voyages in skin-covered boats across Behring Strait.

Fossil ivory, consisting of the tusks of mammoths (large animals now extinct), is procured in great quantities on the New Siberia Islands and near the mouths of the rivers in the Tundra.—(*Consult Simmonds's "Animal Products," p. 344.*)

For the areas, etc., of the countries of Asia, see Table on p. 103.

Siberia is valuable chiefly for its minerals and furs. A large part of the population is composed of exiles from European Russia and their descendants; criminals and political offenders are sent out every week from Moscow in convoys of two hundred or more. Some of these are compelled to labor in the mines.

Siberia is the seat of an immense overland trade with China. Teas, silks, satins, porcelain, etc., are obtained from the Chinese, in exchange for furs, lamb-skins, metals, cottons, linens, and other goods. Kiachta (*ke-ahk′tah*) is the chief emporium of this trade. The great caravan-route from Pekin, China, to Moscow, nearly 4,500 miles in length, passes through Irkutsk (*ir-kootsk′*), the capital of Eastern Siberia, and Tobolsk, the capital of Western Siberia.

Russian Turkestan embraces regions lately acquired by Russia in Central Asia. It includes extensive steppes occupied by wandering tribes. These nom′ads (that is, *wanderers*) are of the Turkish stock and the Mohammedan faith; they live on the products of their sheep, goats, and camels, and by plundering caravans.

Tashkend′ is the capital of Russian Turkestan. Samarcand′ was once the metropolis of a great Tartar empire.

Parts of this region were formerly embraced in independent khanates—that is, petty states governed by khans or chiefs. Khiva (*ke′vah*) and Bokhara (*bo-kah′rah*), though under Russian control, are still nominally independent, and with large, hilly tracts inhabited by barbarous Turcomans, constitute what is called Independent Turkestan. The city of Bokhara is the principal seat of Mohammedan learning.

Transcaucasia (the country beyond the Caucasus) includes Georgia, noted for the beauty of its people. Tif′lis, which carries on an extensive caravan-trade with Persia, is the capital.

TURKEY, ARABIA.

Asiatic Turkey.—In this part of the Ottoman Empire are embraced, among other regions, Asia Mi′nor, the western extremity of Asia, lying between the Black Sea and the Mediterranean; Syria (including Palestine, or the Holy Land), on the eastern border of the Mediterranean; and Armenia, in the northeast. The people differ widely in descent, religion, and language. Under the misrule of rapacious pashas (*pa̭-shaws′*—Turkish viceroys), life and property are insecure, and industry has little encouragement.—Turkey has extended her sway over that part of Arabia which borders on the Red Sea.

Grains and fruits are produced in abundance. The exports include dried figs, raisins, silk, cotton, opium, wool, goats'-hair, sponges, and leeches.

Cities.—Smyrna is the center of maritime commerce. Damascus, the largest city, nearly 4,000 years old, manufactures *damask* silk, cottons, prints, iron-castings, saddlery, glass-ware, etc., and maintains a profitable caravan-trade with various points. Jerusalem, the scene of the most important events recorded in Scripture, and once the most famous city of the East, is now a place of but 28,000 inhabitants—Mohammedans, Jews, and Christians.

In the strip of Arabia under Turkish rule are Mecca and Medina (*me-de′na̭*), which were respectively the birthplace and the burial-place of Mohammed, and are therefore held sacred by his followers. Every year these cities are crowded with pilgrims from all parts of the Mohammedan world. Mocha is noted for exporting excellent coffee.

Arabia consists principally of a parched and barren plateau, bordered by low mountain-ranges. Oases are found in the neighborhood of springs, and fertile valleys are formed on the interior slopes, where streams from the rain-collecting heights irrigate the soil before they are absorbed by the sand. Nedjed is an extensive kingdom in the interior, noted for its fine breed of horses.

The Ar′abs that dwell in the open country are known as Bed′ouins, and are divided into tribes, each ruled by its own sheik, or chief. They raise millet and other grains, but their main employment is the care of their horses and camels; caravans often suffer from their attacks. Dates and tamarinds, frankincense and gum-arabic, are found in Arabia. Sponges, coral, ambergris, tortoise-shell, and especially pearls, are obtained by fishermen on the coast.

The carrying-trade of the Arabs is large; they gather the products of Africa and Persia, in exchange for cotton-goods and other manufactures obtained from India. Muscat, said to be the hottest place in the world, enjoys a large share of this traffic, by reason of its excellent harbor and convenient position near the entrance of the Persian Gulf; it is the capital of the Sultan of Oman (*o-mahn′*). A′den, the Gibraltar of the East, belongs to the British, and is an important coaling and supply station for steamers.

PERSIA, AFGHANISTAN, BELOOCHISTAN.

General Description.—These countries, the aggregate area of which is nearly one-third that of the United States, form the Plateau of Iran, bordered and intersected by mountain-ranges. While pasture-lands and fruitful valleys occur, a great part of the country is desert. Modifying sea-breezes being shut out, the climate is intensely hot in summer and cold in winter. The most valuable productions are wheat and barley in the uplands—rice, tobacco, and melons, with some sugar-cane, cotton, and indigo, in the low plains—and dates, which grow everywhere in the oases.

The people are Mohammedans. Except in the towns, their pursuits are principally pastoral. There are no roads for wheeled vehicles; internal commerce is carried on exclusively by caravans.

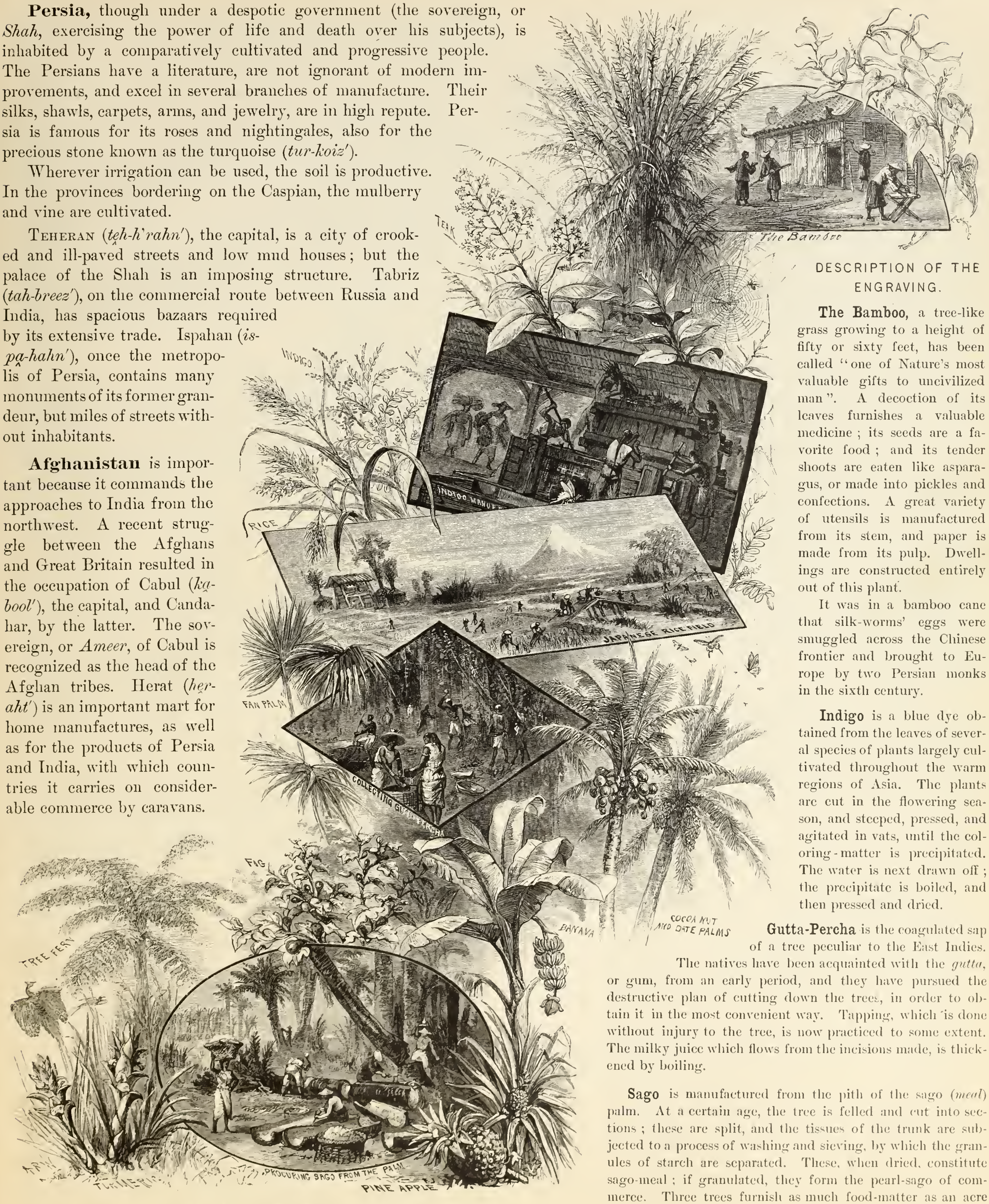
Beloochistan is mostly barren. Its tribes are subject to the Khan of Kelat (*ke̤l-aht′*).

Persia, though under a despotic government (the sovereign, or *Shah*, exercising the power of life and death over his subjects), is inhabited by a comparatively cultivated and progressive people. The Persians have a literature, are not ignorant of modern improvements, and excel in several branches of manufacture. Their silks, shawls, carpets, arms, and jewelry, are in high repute. Persia is famous for its roses and nightingales, also for the precious stone known as the turquoise (*tur-koiz′*).

Wherever irrigation can be used, the soil is productive. In the provinces bordering on the Caspian, the mulberry and vine are cultivated.

Teheran (*tĕh-h′rahn′*), the capital, is a city of crooked and ill-paved streets and low mud houses; but the palace of the Shah is an imposing structure. Tabriz (*tah-breez′*), on the commercial route between Russia and India, has spacious bazaars required by its extensive trade. Ispahan (*is-pȃ-hahn′*), once the metropolis of Persia, contains many monuments of its former grandeur, but miles of streets without inhabitants.

Afghanistan is important because it commands the approaches to India from the northwest. A recent struggle between the Afghans and Great Britain resulted in the occupation of Cabul (*kȃ-bool′*), the capital, and Candahar, by the latter. The sovereign, or *Ameer*, of Cabul is recognized as the head of the Afghan tribes. Herat (*hĕr-aht′*) is an important mart for home manufactures, as well as for the products of Persia and India, with which countries it carries on considerable commerce by caravans.



Some of the Industries of Asia.

DESCRIPTION OF THE ENGRAVING.

The Bamboo, a tree-like grass growing to a height of fifty or sixty feet, has been called "one of Nature's most valuable gifts to uncivilized man". A decoction of its leaves furnishes a valuable medicine; its seeds are a favorite food; and its tender shoots are eaten like asparagus, or made into pickles and confections. A great variety of utensils is manufactured from its stem, and paper is made from its pulp. Dwellings are constructed entirely out of this plant.

It was in a bamboo cane that silk-worms' eggs were smuggled across the Chinese frontier and brought to Europe by two Persian monks in the sixth century.

Indigo is a blue dye obtained from the leaves of several species of plants largely cultivated throughout the warm regions of Asia. The plants are cut in the flowering season, and steeped, pressed, and agitated in vats, until the coloring-matter is precipitated. The water is next drawn off; the precipitate is boiled, and then pressed and dried.

Gutta-Percha is the coagulated sap of a tree peculiar to the East Indies. The natives have been acquainted with the *gutta*, or gum, from an early period, and they have pursued the destructive plan of cutting down the trees, in order to obtain it in the most convenient way. Tapping, which is done without injury to the tree, is now practiced to some extent. The milky juice which flows from the incisions made, is thickened by boiling.

Sago is manufactured from the pith of the sago (*meal*) palm. At a certain age, the tree is felled and cut into sections; these are split, and the tissues of the trunk are subjected to a process of washing and sieving, by which the granules of starch are separated. These, when dried, constitute sago-meal; if granulated, they form the pearl-sago of commerce. Three trees furnish as much food-matter as an acre of wheat.

INDIA.

Extent.—India (*see map, p. 96*) embraces the peninsula of Hindostan, and the country on the north extending to the Himalaya and Karako′rum Mountains—British Burmah, east of the Bay of Bengal—and the island of Ceylon. The area of India, as thus defined, exceeds a million and a half square miles, and its population is 252,500,000.

Government.—Over most of this vast region, Great Britain has extended her sway; and to the title of her queen has recently been added that of "Empress of India". The supreme authority is vested in a Governor-General, or Viceroy, and his Council, both appointed by the British Crown.

Most of the native states not directly subject to Great Britain, while ruled by their own Ra′jahs, or princes, are under British protection and control. Nepaul′ and Bootan (*boo-tahn′*) are independent.

Industrial Pursuits.—Where so many millions have to find subsistence, agriculture is necessarily the leading pursuit. Rice, the chief article of food, is raised in great abundance; and in the production of cotton, on which the people depend for clothing, India is surpassed only by the United States. Both these articles are extensively exported to Great Britain, as also are jute, flax, indigo, and tea. Large quantities of opium, produced in the poppy-gardens of the fertile Ganges Valley, are sent to China.

Ceylon is the most important coffee-producing country belonging to Great Britain, and is noted also for its cinnamon and cocoanuts.

The products of the peninsula intended for shipment are brought to the great seaports by railroads, of which more than 9,300 miles are now in operation. Considerable merchandise finds an outlet by means of caravans, which traffic extensively with China and Western Asia.

The Hindoos are skillful manufacturers. The fine shawls of Cashmere, woven from long silky goats'-hair, as well as the muslins and metal-work of India, have a wide reputation.

People.—India contains one European to about 3,500 natives. The Hindoos have sprung from that same great Aryan family from which successive tribes went forth to colonize Europe. They thus belong to the same parent-stock as most of the European nations and ourselves, and are similarly related to the Persians and Afghans, who are also of Aryan descent.

The Hindoos of the higher class are acute reasoners and learned scholars. They have a rich literature, extending back for forty centuries and preserved in one of the most polished and harmonious of languages, the ancient Sanskrit. Of this language, the prevailing tongue spoken at the present day, called Hindoostan′ee, is a corrupted form.

Stan is the Persian word for country. Hindo-*stan* is the country of the River Indus (the *fertilizer*).—The people of British Burmah are Mongolians.

Cities.—Calcutta, the capital of British India, is situated on the Hoogly River, the western mouth of the Ganges, eighty miles from the Bay of Bengal. Its commerce is larger than that of any other city of Asia. Next in commercial importance among the many large cities of India are Bombay and Madras, which are connected with the capital by railroad. Delhi (*del′le*) was formerly the capital of India. Benares (*ben-ah′rĕs*), the center of Brahmanical learning, is held sacred by the natives. Rangoon, the principal place in British Burmah, exports petroleum (obtained in the neighborhood), teak-timber, rice, and cotton.

Questions.— Of what is Asiatic Russia made up? Give an account of Siberia; the "Northeast Passage"; the native tribes of Siberia. Where is fossil ivory obtained? For what is Siberia chiefly valuable? Of whom is the Russian population partly composed? Give an account of the overland trade of Siberia. State what you can about Russian Turkestan and its inhabitants. Independent Turkestan. Transcaucasia. What are embraced in Asiatic Turkey? What is the condition of the people? Name and describe the chief cities.

Describe Arabia. Give an account of the Bedouins; of the carrying-trade of the Arabs; of the cities. Give a general description of Persia, Afghanistan, and Beloochistan. What is the government of Persia? Describe the people; the cities. What makes Afghanistan important? What is the capital of Afghanistan?

What are embraced in India? State the area and population of India. Give an account of the government. Mention the principal agricultural products and exports. For what is Ceylon noted? How do the products of the peninsula find outlets? What manufactures of the Hindoos are celebrated? To what nations are the Hindoos related? Give an account of their ancient literature. Describe some of the cities of India.

INDO-CHINA.

Indo-China, also called Chin-India and Farther India, embraces the whole of the eastern peninsula of Southern Asia except British Burmah. Besides the three principal kingdoms of Anam′, Siam′, and Burmah, it contains Lower Co′chin-China, the most important French colony in Asia—the kingdom of Cambodia, under French protection—some petty states in the Malay Peninsula, ruled by native chiefs—and the Straits Settlements, on the same peninsula, belonging to the British.

General Description.—In climate and fertility, this peninsula resembles Hindostan. Its mountain-ranges, clad in forests, are rich in minerals, to some extent developed; its valleys yield abundant crops. Rice is the principal product and export; other leading exports are tobacco, sugar, and spices. The commerce is principally in the hands of Europeans and Chinese.

Most of the people belong to the Mongolian race, and their language resembles the Chinese. But in the Malay Peninsula the Malay race and Malay dialects predominate. The native governments are despotic.

Anam is the most populous kingdom of Indo-China, but Siam is the largest and most progressive. In the latter country education is cared for, and European improvements have been introduced to some extent. The elephant, which abounds in the forests, is the emblem of Siam, and appears on its flag and coins. The Burmese are a gay and indolent people. They display some skill in building boats, casting bells, and making gold and silver ornaments; but, in general, manufactures throughout the peninsula are few and simple.

Cities.—Bangkok, the capital of Siam and center of its foreign trade, is the largest city of Indo-China: it stands in a marshy region, and many of the houses are built on piles and rafts. Hue′ (*hoo-ay′*), strongly fortified with walls defended by cannon, is the capital of Anam; and Mandelay, of Burmah. Singapore, a fortified city commanding the Strait of Malacca, is the principal seaport belonging to the British; it is a great mart for sago, tin, and rice.

THE CHINESE EMPIRE.

The Chinese Empire is about one-sixth larger than the whole of Europe. Its population, exceeding 434,000,000, is nearly one-third that of the entire globe. The people are Mongolians.

The northern divisions of this great empire, Mantchooria, Mongolia, and Eastern Turkestan, contain vast deserts, and are inhabited by pastoral people of the Tartar race, who find sustenance for their horses, camels, and sheep, by moving from place to place on the steppes. Maimatchin (*mi-mah-cheen'—place of traffic*), near the northern frontier, and KASHGAR and Yarkand, in Eastern Turkestan, are the seats of an extensive caravan-trade between China and Russia.

Corea is ruled by a king, who pays an annual tribute to the Emperor of China. Thibet is a high, cold, and for the most part barren country, rich in minerals, though its chief wealth consists in its sheep, goats, and cattle. LASSA is the capital.

China Proper, in the southeastern part of the empire, contains the great bulk of the population; hundreds of thousands live in boats on the large rivers. Valuable minerals abound. Gardening and farming are conducted skillfully, though with rude implements. Rice, the national food, and tea, yielding the national beverage, are the agricultural staples. Raw silk is produced in large quantities for both home use and export. The Chinese display remarkable skill in various kinds of hand-labor, and are specially famous for their silks, satins, porcelain, and ivory-carvings.

Commerce.—The rivers, and canals connecting them, furnish great advantages for internal trade. Commerce with foreign countries was formerly restricted; but within a few years twenty-one ports, including Shanghai (*shang-hi'*), Canton', Foo-chow, Swatow (*swah-tou'*), Amoy', and Tien-tsin (*te-en-tseen'*), have been opened to foreign trade. Tea and silk are the principal exports; opium and cotton goods, the leading imports.

TEA—THE LEAF AND BLOSSOM: PICKING, FIRING, SHIPPING.

The tea-plant, shown in the engraving, attains a height of about five feet. The leaves are gathered three times each year. Green and black tea are not from different species of plants, but are differently prepared. To produce the former, the leaves, soon after being picked, are exposed to heat for a few moments in iron pans over charcoal-fires, then rolled, and again "fired" for two or three hours, coloring-matter being added. In the case of black tea, the leaves are exposed to the air for some time before they are fired at all, and are then fired and rolled several times. Russia takes about one-seventh of all the tea that China exports.

One-tenth of the people of China live on fish, which abound in the rivers.—*Chow*, which appears as the final syllable in many Chinese names, means *town of the second rank*. *Ho* and *kiang* mean *river*.

The Chinese have a written language, and a literature extending back for hundreds of years. They have for centuries possessed many inventions, and practiced many arts, which have been regarded as the outgrowth of modern progress; but, avoiding intercourse with the rest of the world, they have stood still and allowed themselves to be outstripped by other nations.—The education of girls is neglected, but all boys are taught to read and write.

Cities.—PEKIN', the capital of the Chinese Empire and the largest city of Asia (population, 1,500,000), contains the national college, the emperor's palace, and the residences of various high dignitaries. There are many large cities in China, besides the seaports named above. One of the most important is Han-kow, the seat of an extensive trade. Hong Kong belongs to the British.

JAPAN.

Japan, the island-empire lying off the eastern coast of Asia, is in about the same latitude as the United States. It consists of four large islands and nearly four thousand small ones; the former are mountainous, and all lie in the remarkable volcanic belt which borders the Pacific on the west.

As in China, rice, tea, and silk, are the principal products; and fish are among the most important articles of food.

The Japanese are an intelligent and civilized people, of the same race and religion as the Chinese, but speaking a different language. Like the Chinese, they formerly excluded foreigners from their country; but lately they have opened their ports to other nations, and have introduced railroads, newspapers, telegraphs, schools, colleges, etc. Their commerce, especially with Great Britain and the United States, is very extensive; their raw silk, tea, bronzes, porcelain and lacquered ware, are in request, and cotton goods are the staple import.

The power of the emperor, or Mikado (*mĭ-kah'do*), is absolute.

Cities.—TO'KIO, the capital and metropolis, covers sixty square miles, much of which is taken up with gardens, sacred groves, etc. The next cities in importance are Kioto (*ke-o'to*), noted for the manufacture of porcelain and lacquered ware; Ozaka (*o'zah-kah*), a leading seat of commerce and manufactures; and Yokohama (*yo-ko-hah'mah*), the port of the capital.

Questions.—Of what is Indo-China composed? Describe Indo-China; its people; its principal cities. Of what is the Chinese Empire composed? Give an account of China and its people; the preparation of tea; the cities of China. Describe the situation of Japan; its products; people; present condition; commerce; cities.

PRINCIPAL COUNTRIES OF ASIA.

Name.	Sq. Miles.	Population.	Important Places.	Name of People.
Asiatic Russia..	6,201,765	11,500,000	Irkutsk, Tobolsk, Tashkend, Tiflis..	Siberians, Turcomans, etc.
Khiva.........	22,300	700,000	Khiva............	Khivans
Bokhara.......	84,000	2,030,000	Bokhara..........	Bokharians
Turkey........	743,486	17,880,000	Damascus, Smyrna, Aleppo, Beyrout..	Turks, Armenians, etc.
Arabia........	968,100	3,700,000	Mecca, Muscat.....	Arabs
Persia........	636,000	7,653,600	Teheran, Tabriz....	Persians
Afghanistan....	278,700	4,000,000	Cabul, Herat.......	Afghans
Beloochistan...	106,800	350,000	Kelat....	Beloo'chees
India..........	1,576,650	252,541,210	Calcutta, Bombay..	Hindoos
Indo-China.....	784,560	33,757,000	Singapore.........	Indo-Chinese
Burmah......	190,500	4,000,000	Mandelay, Ava.....	Burmese
Siam........	309,000	5,750,000	Bangkok..........	Siamese
Anam.......	198,000	21,000,000	Hué, Kesho........	Anamese
Chinese Empire.	4,540,000	434,500,000	....	....
China Proper.	1,554,000	405,000,000	Pekin, Canton......	Chinese
Japan.........	146,613	34,338,479	Tokio, Yokohama...	Japanese

AFRICA.

Area (including islands), 10,941,000 sq. mi. Population, 205,000,000.

Situation.—Africa is a large peninsula, forming the southwestern part of the Eastern Continent. It is united with Asia by the Isthmus of Suez; but this isthmus having been cut through for the purpose of connecting the Red Sea with the Mediterranean by a ship-canal, Africa is thus artificially made an independent continent. It is the only Grand Division that extends across the whole width of the Torrid Zone.

Size, etc.—In size, Africa ranks second among the Grand Divisions; in population, third. It is more than three times as large as the United States, and contains about four times as many inhabitants. It is distinguished for the extent of its deserts, the number and size of its wild animals, and the large proportion of its people that are in the savage and barbarous states.

Coast-line.—Owing to its unbroken outline, Africa has a smaller coast-line (16,000 miles) in proportion to its size than any other Grand Division. Its compactness, added to a lack of facilities for reaching the interior, such as numerous navigable rivers would afford, has been an obstacle to the growth of commerce and the progress of civilization.

Divisions. — The principal divisions of Africa are "the Barbary States"—Morocco, Algeria, Tunis, and Tripoli; Egypt; Abyssinia, Somauli, Zanguebar, and Mozambique, in Eastern Africa; Cape Colony and Natal (*nah-tahl*), in Southern Africa; Guinea and Senegambia, on the western coast; Sahara (*sa̤-hah'ra̤*), or the Great Desert; Soudan (*soo-dahn'*), an extensive district in the interior; and Central Africa, divided among a great number of savage tribes.

Map Questions.—(*Refer to the opposite map.*) In what part of Africa, and in what zone or zones, is each of the divisions just named? Which are in north latitude? Which are wholly or partly in west longitude? Which divisions border on the Mediterranean Sea? Which, on the Indian Ocean? Which, on the Atlantic Ocean? On what body of water has Africa the longest coast-line? In what direction is Africa longest?

Islands of Africa.—Besides the divisions just named, many islands belong to Africa. The most important of these are Madagascar, Mauritius, Réunion, and three groups off the northwestern coast—the Cape Verd, Canary, and Madeira Islands.

Madagascar, a fertile island larger than France or the German Empire, abounds in valuable cabinet and dye-woods, in rice, ginger, pepper, cocoanuts, and other tropical products. Many of the Madagassies, as the natives are called, have embraced Christianity. Tananarivo (*tah-nah-nah-re-voo'*) is the capital.—Mauritius belongs to Great Britain, and Réunion to France; both are of volcanic origin, and are subject to terrific hurricanes. Sugar and coffee are the staple exports.

The Cape Verd and Madeira Islands belong to Portugal; tropical fruits are produced abundantly on both. Funchal (*foon-shahl'*), the port of the latter group, is a stopping-place for steamers, and is connected with Lisbon and Brazil by submarine telegraph cables. The Canary Islands are a dependency of Spain; they contain the lofty peak of Teneriffe, a volcano constantly emitting sulphurous vapors.

People.—The inhabitants of Northern Africa and of Abyssinia are principally of the Caucasian race. The rest of the Grand Division, with the exception of some districts on the coasts, is peopled mostly by negroes, ignorant, superstitious, and uncivilized. They are divided into different tribes, under despotic chiefs or kings.

Nearly half the population of Africa are Mohammedans; the Christians number about 7,000,000. Among the rest different forms of Paganism prevail, and in some of these the most disgusting rites are employed.

MAP QUESTIONS ON AFRICA.

General Questions.—What countries of Africa are crossed by the equator? What river and lake? Name the capital of Egypt and largest city of Africa. Cairo (*ki'ro*) is in about the same latitude as what city of the United States? In what zone is most of Africa? What small countries are in Southern Africa, northeast of Cape Colony? Mention some of the divisions of Egypt.

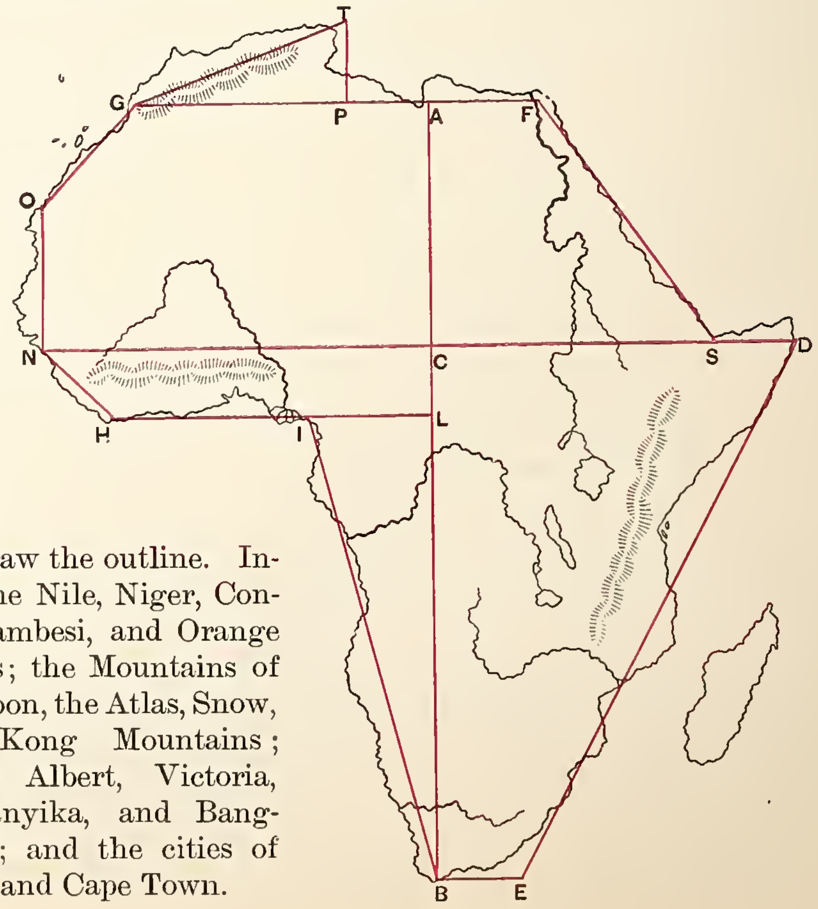
Coast-Waters.—By what waters is Africa separated from Europe? From Asia? What arms of the Mediterranean Sea indent the northern coast? Describe the Strait of Gibraltar. Of what is the Gulf of Aden an arm? What strait, dangerous to navigators, connects the Gulf of Aden with the Red Sea? What separates Madagascar from the mainland? Describe the Gulf of Guinea.

Rivers, Lakes, etc.—Which is the longest river of Africa? Describe the Nile. What city, founded by and named after Alexander the Great (332 B. C.), is at its mouth? Describe the Congo River, called also *Livingstone*, after an Englishman who explored Central Africa. Describe the Zambesi (*zam-bay'ze*) River. What falls, rivaling Niagara in grandeur, are on this river? Into what does the Orange River flow? Describe the Ni'ger. What lake is in Soudan? Name the largest lake of Africa. How is Lake Victoria situated? Lake Tanganyika (*tahn-gahn-ye'ka̤*)? Lake Nyassa (*ne-ahs'sa̤*)? Lake Albert?

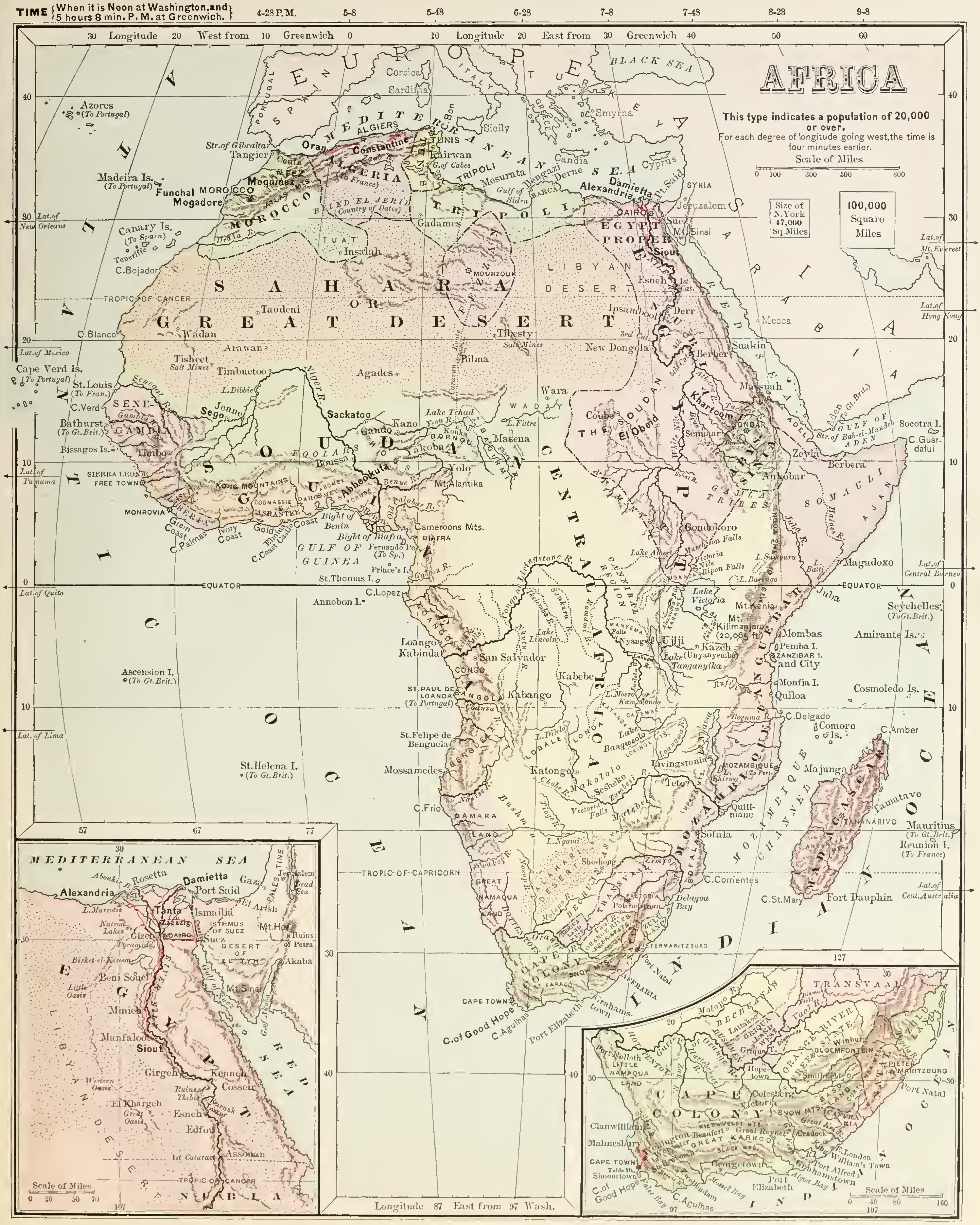
Mountains, etc.—Name the four principal mountain-ranges of Africa. In what part of the Grand Division is each? How does each trend, relatively to the nearest coast? What cape is at the northern extremity of Africa? The eastern? The southern? The western? Where is the Cape of Good Hope? The Kalahari (*kah-lah-hah're*) Desert? St. Hele'na, where Napoleon was imprisoned after his defeat at Waterloo?

DIRECTIONS FOR DRAWING THE MAP.

Draw the vertical line A B = 4,480 mi.
Take A C = 1,450 mi., and C L = 375 mi.
Draw the horizontal lines A F = 650 mi., A G = 1,700 mi., C D = 2,140 mi., C N = 2,290 mi., L H = 1,850 mi., and B E = 500 mi.
Take C S = 1,660 mi., L I = 730 mi., and A P = 500 mi.
Draw the vertical lines P T = 500 mi., and N O = 820 mi.
Draw F S, D E, B I, H N, O G, and G T.



Draw the outline. Insert the Nile, Niger, Congo, Zambesi, and Orange Rivers; the Mountains of the Moon, the Atlas, Snow, and Kong Mountains; Lakes Albert, Victoria, Tanganyika, and Bangweolo; and the cities of Cairo and Cape Town.


TIME {When it is Noon at Washington, and 5 hours 8 min. P.M. at Greenwich.}
4-28 P.M.
5-8
5-48
6-28
7-8
7-48
8-28
9-8
30 Longitude 20 West from 10 Greenwich 0
10 Longitude 20 East from 30 Greenwich 40
50
60
AFRICA
This type indicates a population of 20,000 or over.
For each degree of longitude going west, the time is four minutes earlier.
Scale of Miles
0 100 300 500 800
Size of N. York 47,000 Sq. Miles
100,000 Square Miles
E U R O P E
Corsica
Sardinia
Sicily
BLACK SEA
Smyrna
Candia
Cyprus
Azores (To Portugal)
Madeira Is. (To Portugal)
Canary Is. (To Spain)
Teneriffe
C. Bojador
Str. of Gibraltar
Tangier
Ceuta
Oran
ALGIERS
Constantine
TUNIS
Kairwan
G. of Cabes
Bon
M E D I T E R R A N E A N   S E A
Funchal
MOROCCO
Mogadore
Mequinez
FEZ
MOROCCO
A L G E R I A (To France)
BELED EL JERID (Country of Dates)
TRIPOLI
Mesurata
Gulf of Sidra
Bengazi
Derne
BARCA
T R I P O L I
Gadames
TUAT
Insalah
Draha R.
Alexandria
Damietta
Pt. Said
CAIRO
Suez
Mt. Sinai
Jerusalem
SYRIA
EGYPT PROPER
Siout
Esneh
1st Cat.
MOURZOUK
FEZZAN
L I B Y A N   D E S E R T
S A H A R A   O R   G R E A T   D E S E R T
TROPIC OF CANCER
Taudeni
Wadan
C. Blanco
Arawan
Tisheet Salt Mines
Timbuctoo
Agades
Tibesty Salt Mines
Bilma
Caravan Route
New Dongola
Ipsambool
Derr
2nd Cat.
3rd Cat.
4th Cat.
5th Cat.
NUBIA
Berber
Suakin
Mecca
A R A B I A
R E D   S E A
Massuah
Cape Verd Is. (To Portugal)
St. Louis (To Fran.)
C. Verd
SENEGAMBIA
Senegal R.
Gambia R.
Bathurst (To Gt. Brit.)
Bissagos Is.
Timbo
Sego
Jenne
L. Dibbie
Niger R.
Sackatoo
Kano
Gando
Yakoba
Boussa
FOOLAHS
S O U D A N
Lake Tchad
Yeou R.
Kouka
BORNOU
BAGIRMI
Shari R.
Masena
L. Fittre
WADAY
Wara
Cobbe
El Obeid
THE SOUDAN
Khartoom
White Nile
Blue Nile
Sennaar
GONDAR
Atbara R.
ABYSSINIA
Adel
Aden (To Gt. Brit.)
Str. of Bab-el-Mandeb
GULF OF ADEN
Socotra I.
C. Guardafui
Zeyla
Berbera
Ankobar
SOMAULI
AJAN
Haines R.
Juba R.
GALLA TRIBES
Sobat R.
NIAM-NIAM
SIERRA LEONE FREE TOWN
KONG MOUNTAINS
COOMASSIE
ASHANTEE
DAHOMEY
ABOMEY
YORUBA
Abbeokuta
Benue R.
Yolo
Mt. Alantika
MONROVIA
LIBERIA
Grain Coast
C. Palmas
Ivory Coast
Gold Coast
Elmina
C. Coast Castle
Bight of Benin
Bight of Biafra
Calabar R.
Old Calabar
Cameroons Mts.
BIAFRA
Fernando Po (To Sp.)
Prince's I.
St. Thomas I.
GULF OF GUINEA
EQUATOR
Annobon I.
C. Lopez
Gaboon R.
Ogowe R.
Loango
Kabinda
Congo or Livingstone R.
San Salvador
CONGO
ST. PAUL DE LOANDA (To Portugal)
ANGOLA
Coanza R.
Kabango
St. Felipe de Benguela
BENGUELA
Mossamedes
C. Frio
Cunene R.
Nourse R.
DAMARA LAND
Bushmen
GREAT NAMAQUA LAND
Swakop R.
Nosop R.
Orange R.
HOTTENTOTS
CAPE COLONY
CAPE TOWN
C. of Good Hope
C. Agulhas
Port Elizabeth
Grahamstown
CAFFRARIA
Port Natal
PIETERMARITZBURG
SNOW MTS.
ORANGE RIVER FREE STATE
Vaal R.
TRANSVAAL
PRETORIA
Potchefstroom
ZULU LAND
Delagoa Bay
Limpopo R.
MATABELE
SOFALA
Sofala
C. Corrientes
Inhambane
L. Ngami
KALAHARI DESERT
Shoshong
BECHUANAS
Molopo R.
C E N T R A L   A F R I C A
CANNIBAL REGION
Sankuru R.
Lake Lincoln
Kabebe
Lake Albert
Murchison Falls
Victoria Nile
Ripon Falls
Lake Victoria
Gondokoro
L. Samburu
L. Baringo
Mt. Kenia
Mt. Kilimanjaro (20,065 ft.)
MANYEMA
Nyangwe
Ujiji
Kazeh (Unyanyembe)
Lake Tanganyika
L. Moero
Kamolondo
L. Dilolo
LOBALE
LONDA
Lake Bangweolo
Livingstonia
Lake Nyassa
Katongo
Makololo
Sesheke
Chobe R.
Zambesi R.
Victoria Falls
Tete
Quilimane
MOZAMBIQUE
Shirwa
Rufiji R.
Rovuma R.
C. Delgado
Mombas
Pemba I.
ZANZIBAR I. and City
Monfia I.
Quiloa
Magadoxo
Juba
Seychelles (To Gt. Brit.)
Amirante Is.
Cosmoledo Is.
Comoro Is.
C. Amber
Majunga
MADAGASCAR
Tamatave
TANANARIVO
MOZAMBIQUE CHANNEL
Mauritius (To Gt. Brit.)
Reunion I. (To France)
Fort Dauphin
C. St. Mary
MTS. OF THE MOON
ZANGUEBAR
Ascension I. (To Gt. Brit.)
St. Helena I. (To Gt. Brit.)
A T L A N T I C   O C E A N
I N D I A N   O C E A N
TROPIC OF CAPRICORN
Lat. of New Orleans
Lat. of Mexico
Lat. of Panama
Lat. of Quito
Lat. of Lima
Lat. of Mt. Everest
Lat. of Hong Kong
Lat. of Central Borneo
Lat. of Cent. Australia
40
30
20
10
0
10
20
30
40
57
67
77
127
Longitude 87 East from 97 Wash.
MEDITERRANEAN SEA
Aboukir B.
Rosetta
Damietta
Alexandria
Port Said
Gaza
PALESTINE
Jerusalem
Dead Sea
L. Mareotis
Tanta
Ismailia
El Arish
Natron Lakes
Zagazig
ISTHMUS OF SUEZ
Mt. Hor
Pyramids
Gizeh
CAIRO
Suez
Ruins of Petra
DESERT OF EL TYH
Akaba
Birket-el-Keroum
Beni Souef
Little Oasis
E G Y P T
Mt. Sinai
G. of Akaba
Gulf of Suez
Minieh
Manfaloot
Siout
L I B Y A N   D E S E R T
RED SEA
Girgeh
Kenneh
Cosseir
Western Oasis
Ruins of Thebes
Karnak
El Khargeh
Great Oasis
Esneh
Edfou
Assouan
1st Cataract
TROPIC OF CANCER
N U B I A
Scale of Miles
0 20 50 70
107
TRANSVAAL
Diamond Field
Vaal R.
Molopo R.
BECHUANAS
Lattakoo
GRIQUA LAND WEST
Griqua T.
Diamonds
ORANGE RIVER FREE STATE
Winburg
BLOEMFONTEIN
ZULU LAND
Tugela R.
PIETERMARITZBURG
Port Natal
Smithfield
Hope-town
Port Nolloth
LITTLE NAMAQUA LAND
HOTTENTOTS
Orange R.
Hartebeest R.
C A P E   C O L O N Y
Colesberg
Victoria
SNOW MTS.
BASUTO LAND
CAFFRARIA
Clanwilliam
NIEUWVELDT MTS.
Beaufort
Graaf Reynet
Cradock
Malmesbury
Wellington
Worcester
GREAT KARROO
BLACK MTS.
CAPE TOWN
Table Mt.
Simonstown
Swellendam
George town
Mossel Bay
Port Elizabeth
Algoa Bay
Grahamstown
Port Alfred
King William's Town
E. London
C. of Good Hope
False Bay
C. Agulhas
I N D I A N   O C E A N
Scale of Miles
0 40 80 160
20
30
97
107

PHYSICAL DIVISIONS AND FEATURES.

SURFACE.

General Description.—(*Refer to the opposite map.*) The interior of Africa is a vast table-land of moderate elevation. Surrounding this, but divided by wide breaks, a belt of higher table-land, from parts of which mountain-ranges rise, extends parallel to the coast. This elevated margin is in turn bordered on the outside by a narrow strip of low plain, skirting the ocean and nearly inclosing the Grand Division.

Lowlands occur in the Sahara, in the neighborhood of Lake Tchad, and along the lower Nile. A large tract south of the Plateau of Barca is depressed a hundred feet or more below sea-level.

The loftiest plateau of Africa is that of Abyssinia, which has an elevation of from 6,000 to 9,000 feet. The broad strip of lower table-land which joins this on the south is broken by several depressions, through which rivers make their way to the Indian Ocean.

Mountains.—The mountains of Africa may be regarded as forming four systems. The Atlas system, in the northwest, is rich in a variety of valuable but undeveloped minerals. Though containing no very lofty peak, it was called after the fabulous giant Atlas, condemned to support the heavens on his shoulders. Extending to the ocean, these mountains gave the Atlantic its name.

The Kong Mountains, on the northern frontier of Upper Guinea, have a mean elevation of about 2,500 feet. Not very far from their eastern extremity are the loftier Cameroons Mountains, containing the principal volcano on the mainland of Africa.

The system of Southern Africa embraces the Snow Mountains and other ranges; its loftiest summit is less than two miles in height. To the eastern system, known as the Mountains of the Moon, belongs Mount Kilimanjaro (*kil-e-mahn-ja-ro'*), the highest peak of Africa.

Africa has fewer volcanoes, and is less subject to earthquakes, than any other Grand Division.

Map Questions.—Of what, as regards elevation, does the greater part of Africa consist? In what parts of the Grand Division are low plains? Where is the Plateau of Barca? The Plateau of Abyssinia? What is the Great Karroo? *A tract of table-land, parched and barren in the dry season, but in the rainy season covered with a luxuriant growth of grass.* Where is the Great Karroo? What countries are traversed by the Atlas Mountains? Near what bight are the Cameroons Mountains? In what country are the Snow Mountains? Where is Mount Kilimanjaro? What is its height? *18,715 feet.* Where is Mount Keni'a? Describe Madagascar, as regards elevation.

DRAINAGE.

Rivers.—Africa has few rivers flowing into the sea; but it has three that rank among the great rivers of the world—the Nile, the Congo, and the Niger.

The Nile is the outlet of the large equatorial lakes, Victoria and Albert; it is 4,000 miles long, and drains a basin of 1,000,000 square miles. For 1,700 miles from its mouth, it receives no tributary. The navigation of the river is interrupted by a series of cataracts; above the latter, boats can ascend for many miles.

The Congo (length, 2,900 miles) discharges a volume of water much greater than that of the Nile or the Mississippi. Traversing the region of equatorial rains, it drains a fertile basin of about 950,000 square miles, abounding in lakes and watercourses.

The Niger, somewhat longer than the Congo, ranks third in volume of water and extent of basin.

The Nile is remarkable for the gradual rise of its waters, commencing every year in June and continuing till the middle of September. Its lower valley is inundated, and on the subsidence of the water is left covered with a thick layer of fertilizing mud, on which luxuriant crops are raised. The rise of the river, which at Cairo is usually not less than forty feet, is attributed to heavy rains in the upper country.

The course of the Congo was ascertained by Stanley, who in 1877, despite many obstacles and dangers, descended the river to its mouth.—(For a full account of the Congo and the region it traverses, *consult Stanley's "Through the Dark Continent".*)

The Orange, the principal river of Southern Africa, is so shallow as to have no commercial importance. The largest river of the Indian Ocean system is the Zambesi, which drains 600,000 square miles, lying in the pasture region of Southern Africa.

Lakes.—The lake region of Africa is situated on, and just south of, the equator. Here, at altitudes of from 2,700 to 4,000 feet, lie the vast bodies of fresh water which feed the great rivers Nile and Congo. Other lakes of this region receive rivers from the interior plateau, as also does Lake Tchad in Soudan.

Map Questions.—What lakes are the source of the Nile? What branch of the Nile issues from Lake Albert? What other branches has the Nile? Of what lakes is the Congo River the outlet? Describe the currents on the eastern coast of Africa. On the western coast. What current is on the south?

CLIMATE.—VEGETATION.—MINERALS.

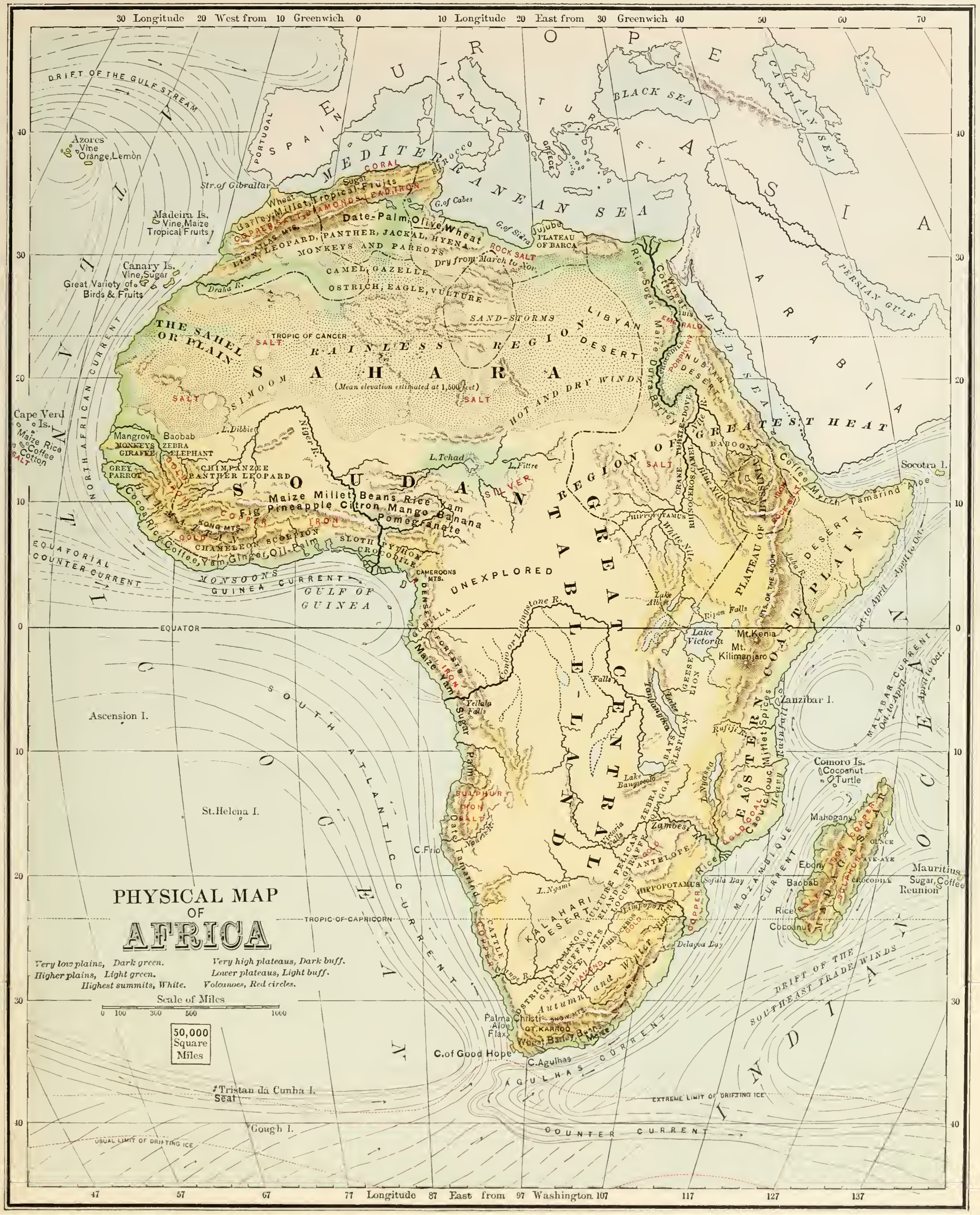
Climate.—The climate of Africa is hot, and in parts of the coast very unhealthy. The region of greatest heat is in the eastern section of the Sahara and the adjoining country on the south, but does not extend to the equator; for there the dense growth of forest vegetation, supported by a heavy rainfall, protects the earth from the sun's rays, and the extreme heat is modified.

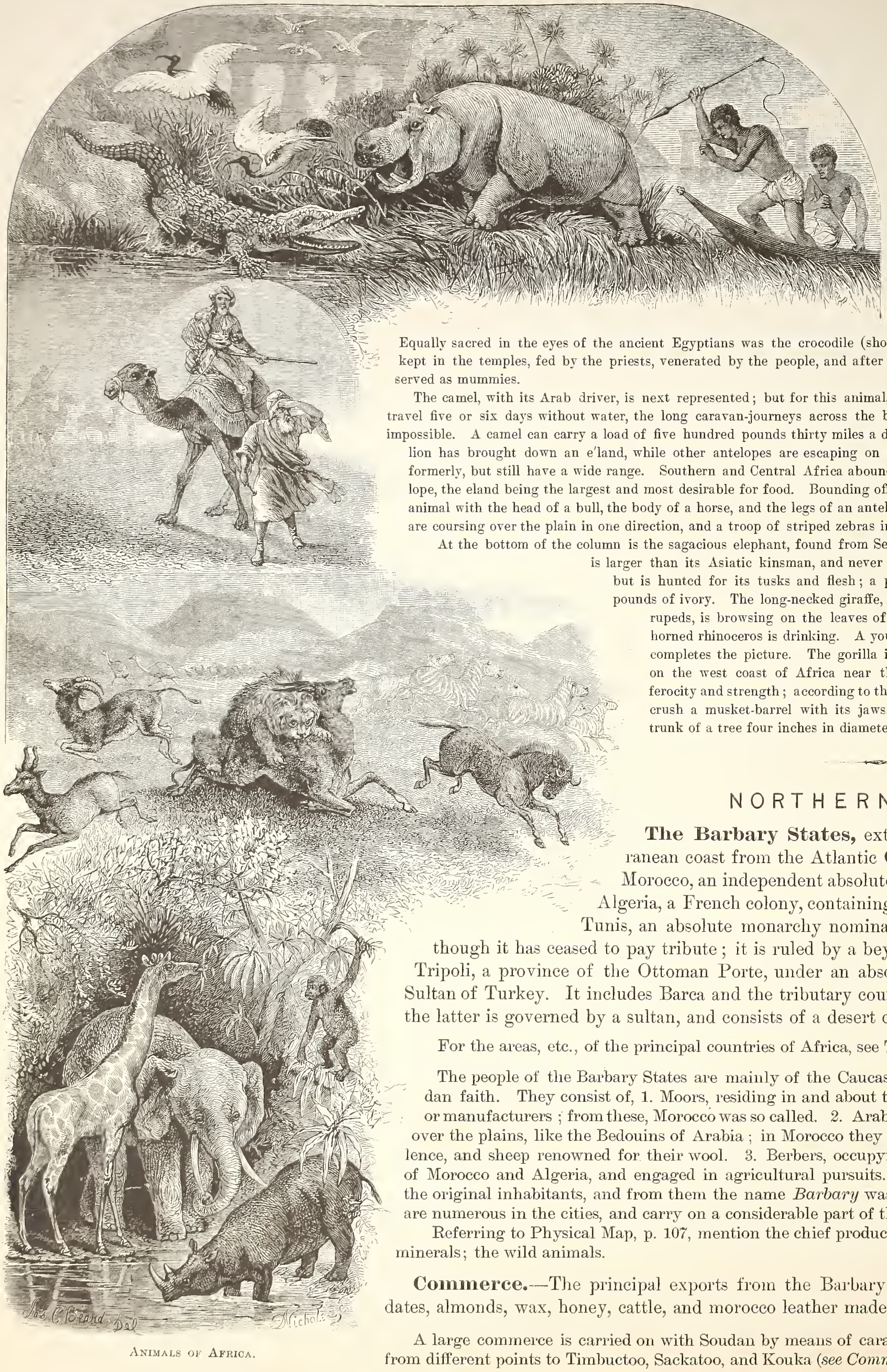
The equatorial rains are due to moist winds from the Indian Ocean; but between parallels 16° and 30° N., the prevailing northeasterly winds, sweeping from the arid wastes of Asia, are comparatively dry, and what little vapor they contain is at once absorbed by the heated air rising from the parched sands. Hence the Sahara is rainless.—The Kalahari Desert is without rain, because the easterly winds, before reaching it, expend their moisture on the high border of the plateau which faces the Indian Ocean.

Vegetation.—Where rain falls, the vegetation is luxuriant. Among the characteristic features of the tropical forests are ba'obab-trees, supposed to be 4,000 years old, and in some cases measuring twenty feet across—acacias, yielding gum-arabic—huge cotton-trees—and majestic palms of nearly a thousand different species. The date-palm flourishes in dry tracts where no other tree would thrive; men, horses, and camels, live on its fruit; and the natives make a wine out of its sap.

Minerals.—Africa has mineral resources of great value. Gold is found in Senegambia, on the Guinea Coast, and in Transvaal and the region north of it. Iron, copper, lead, and salt, occur in various places. The diamond-fields on the Vaal and Orange Rivers are now the principal source from which diamonds are obtained.

Questions.—How is Africa situated? How does it rank in size and population? What can you say of its coast-line? Mention its principal divisions. Give some account of the most important islands. Describe the people. State what you can about the surface of Africa. Where do isolated lowlands occur? What is the loftiest plateau of Africa? Give an account of the four mountain-systems. Of the Nile and its inundations. The Congo. The Niger. The Orange. The Zambesi. The lakes of Africa. To what are the equatorial rains due? Why is the Sahara rainless? The Kalahari Desert? Mention some characteristic trees. Mention the principal minerals.


PHYSICAL MAP OF AFRICA
Very low plains, Dark green.
Higher plains, Light green.
Highest summits, White.
Very high plateaus, Dark buff.
Lower plateaus, Light buff.
Volcanoes, Red circles.
Scale of Miles
0 100 300 500 1000
50,000 Square Miles
30 Longitude 20 West from 10 Greenwich 0
10 Longitude 20 East from 30 Greenwich 40
50
60
70
47 57 67 77 Longitude 87 East from 97 Washington 107 117 127 137
EUROPE
ASIA
ARABIA
SPAIN
PORTUGAL
ITALY
GREECE
TURKEY
BLACK SEA
CASPIAN SEA
PERSIAN GULF
RED SEA
MEDITERRANEAN SEA
Sirocco
Str. of Gibraltar
G. of Cabes
G. of Sidra
PLATEAU OF BARCA
Jujube
DRIFT OF THE GULF STREAM
Azores
Vine
Orange, Lemon
Madeira Is.
Vine, Maize
Tropical Fruits
Canary Is.
Vine, Sugar
Great Variety of Birds & Fruits
Cape Verd Is.
Maize Rice
Coffee
Cotton
SALT
CORAL
Sugar
Barley, Millet, Tropical Fruits
Wheat
COPPER, SALT, DIAMONDS, LEAD, IRON
ATLAS MTS.
Date-Palm, Olive, Wheat
LION, LEOPARD, PANTHER, JACKAL, HYENA
MONKEYS AND PARROTS
ROCK SALT
Dry from March to Nov.
CAMEL, GAZELLE
OSTRICH, EAGLE, VULTURE
Draha R.
THE SAHEL OR PLAIN
TROPIC OF CANCER
SAND-STORMS
RAINLESS REGION
LIBYAN DESERT
SAHARA
(Mean elevation estimated at 1,500 feet)
SIMOOM
HOT AND DRY WINDS
NORTH AFRICAN CURRENT
L. Dibbie
Niger R.
L. Tchad
L. Fittre
Mangrove
MONKEYS
GIRAFFE
Baobab
ZEBRA
ELEPHANT
GREY PARROT
CHIMPANZEE
PANTHER LEOPARD
SOUDAN
SILVER
Maize Millet Beans Rice Yam
Fig Pineapple Citron Mango Banana
Pomegranate
KONG MTS.
COPPER
IRON
GOLD
CHAMELEON SCORPION
SLOTH
PYTHON
CROCODILE
Cocoa, Rice, Coffee, Yam, Ginger, Oil-Palm
EQUATORIAL COUNTER CURRENT
MONSOONS
GUINEA CURRENT
GULF OF GUINEA
CAMEROONS MTS.
DENSE FORESTS
GORILLA
UNEXPLORED
Cotton
Sugar
Rice
Wheat
Maize Dura Barley
EMERALD
PORPHYRY
NUBIAN DESERT
Nile R.
REGION OF GREATEST HEAT
TURTLE-DOVE
CRANE
RHINOCEROS, CAMEL
BABOON
Blue Nile
ABYSSINIA
HIPPOPOTAMUS
White Nile
RHINOCEROS
GREAT CENTRAL TABLE-LAND
PLATEAU OF
MTS. OF THE MOON
IRON
ROCK SALT
Coffee, Myrrh, Tamarind, Aloe
DESERT PLAIN
Juba R.
Socotra I.
Lake Albert
Ripon Falls
Lake Victoria
Mt. Kenia
Mt. Kilimanjaro
GEESE
LION
EASTERN COAST
Zanzibar I.
Spices
Millet
Rainfall
Heavy
Caoutchouc
Rufiji R.
Oct. to April
April to Oct.
MALABAR CURRENT
EQUATOR
Congo or Livingstone R.
Falls
Tanganyika
Lake
BATS
ELEPHANT
Maize
Yam
IRON
Yellala Falls
Sugar
Palm
SULPHUR
IRON
SALT
Date
Tamarind
Nourse R.
C. Frio
Lake Bangweolo
L. Nyassa
ZEBRA
QUAGGA
Victoria Falls
Zambesi R.
PELICAN
GIRAFFE
GOLD
ANTELOPE
GOLD
COAL
Comoro Is.
Cocoanut
Turtle
Mahogany
MADAGASCAR
COPPER
IRON
SALT
GOLD
OUNCE
AYE-AYE
CROCODILE
Ebony
Baobab
Rice
Cocoanut
Mauritius
Sugar, Coffee
Reunion
MOZAMBIQUE CURRENT
Sofala Bay
Rice
HIPPOPOTAMUS
L. Ngami
KALAHARI DESERT
VULTURE
ELAND
LOCUST
Limpopo R.
RHINOCEROS
GOLD
COPPER
Delagoa Bay
CATTLE
COPPER
Orange R.
MANGO
BUFFALO
ANTS
GNU
HYENA
OSTRICH
FLAMINGO
DIAMOND
Winter
Autumn and
SNOW MTS.
GT. KARROO
Wheat Barley Beans
Maize
Palma Christi
Aloe
Flax
C. of Good Hope
C. Agulhas
AGULHAS CURRENT
COUNTER CURRENT
EXTREME LIMIT OF DRIFTING ICE
USUAL LIMIT OF DRIFTING ICE
DRIFT OF THE SOUTHEAST TRADE WINDS
SOUTH ATLANTIC CURRENT
ATLANTIC OCEAN
INDIAN OCEAN
Ascension I.
St. Helena I.
Tristan da Cunha I.
Seal
Gough I.
TROPIC OF CAPRICORN
40
30
20
10
0
10
20
30
40



Animals of Africa.

DESCRIPTION OF THE ENGRAVING.

The clumsy hippopotamus (*river-horse*) is the central figure in the upper part of the engraving. At one time common in all the large rivers of Africa, it is now rare except in solitary regions. It is hunted for its flesh, which resembles pork, for its skin, and for its teeth, formerly much used in the manufacture of artificial human teeth.

The birds about alighting are ibises, anciently held sacred in Egypt as harbingers of plenty, because appearing just before the rise in the waters of the Nile. Equally sacred in the eyes of the ancient Egyptians was the crocodile (shown near the ibis); crocodiles were kept in the temples, fed by the priests, venerated by the people, and after death embalmed and carefully preserved as mummies.

The camel, with its Arab driver, is next represented; but for this animal, which thrives on thistles and can travel five or six days without water, the long caravan-journeys across the burning sands of Sahara would be impossible. A camel can carry a load of five hundred pounds thirty miles a day. In the center of the column a lion has brought down an e'land, while other antelopes are escaping on the left; lions are rarer now than formerly, but still have a wide range. Southern and Central Africa abound in different varieties of the antelope, the eland being the largest and most desirable for food. Bounding off on the right is the gnu, a peculiar animal with the head of a bull, the body of a horse, and the legs of an antelope. In the background, ostriches are coursing over the plain in one direction, and a troop of striped zebras in the other.

At the bottom of the column is the sagacious elephant, found from Senegambia to the Orange River. It is larger than its Asiatic kinsman, and never like him domesticated and trained, but is hunted for its tusks and flesh; a pair of the former will furnish 125 pounds of ivory. The long-necked giraffe, or camel'opard, the tallest of quadrupeds, is browsing on the leaves of trees; and the thick-skinned two-horned rhinoceros is drinking. A young gorilla, on the branch of a tree, completes the picture. The gorilla is the largest of apes. It is found on the west coast of Africa near the equator, and is remarkable for ferocity and strength; according to the French traveler, Du Chaillu, it can crush a musket-barrel with its jaws, and with its hands twist off the trunk of a tree four inches in diameter.

* * *

NORTHERN AFRICA.

The Barbary States, extending along the Mediterranean coast from the Atlantic Ocean to Egypt, are—

Morocco, an independent absolute monarchy, under a sultan:

Algeria, a French colony, containing many European residents:

Tunis, an absolute monarchy nominally dependent on Turkey, though it has ceased to pay tribute; it is ruled by a bey (*governor*):

Tripoli, a province of the Ottoman Porte, under an absolute bey appointed by the Sultan of Turkey. It includes Barca and the tributary country of Fezzan (*fez-zahn'*); the latter is governed by a sultan, and consists of a desert containing numerous oases.

For the areas, etc., of the principal countries of Africa, see Table on p. 111.

The people of the Barbary States are mainly of the Caucasian race and the Mohammedan faith. They consist of, 1. Moors, residing in and about the towns, and mostly traders or manufacturers; from these, Morocco was so called. 2. Arabs, wandering with their flocks over the plains, like the Bedouins of Arabia; in Morocco they raise horses of superior excellence, and sheep renowned for their wool. 3. Berbers, occupying the mountainous districts of Morocco and Algeria, and engaged in agricultural pursuits. They have descended from the original inhabitants, and from them the name *Barbary* was applied to the states. Jews are numerous in the cities, and carry on a considerable part of the trade.

Referring to Physical Map, p. 107, mention the chief products of the Barbary States; the minerals; the wild animals.

Commerce.—The principal exports from the Barbary States are grain, olive-oil, dates, almonds, wax, honey, cattle, and morocco leather made from goats'-skins.

A large commerce is carried on with Soudan by means of caravans, which cross the desert from different points to Timbuctoo, Sackatoo, and Kouka (*see Commercial Map, p. 117*). Gums, elephants'-tusks, ostrich-feathers, gold, etc., are obtained from the natives, in exchange for cotton goods and other manufactures. To facilitate this traffic, a railroad will probably soon be built across the Sahara, passing through Insalah (*in-sah'lah*), on the present route from the northern coast to Timbuctoo.

Cities.—MOROCCO and FEZ, the latter noted for the manufacture of red caps (called *fez'es*) common throughout Northern Africa, are the capitals of Morocco. ALGIERS is the capital of Algeria. TUNIS, a city of unpaved and dirty streets, is the capital of Tunis; and TRIPOLI, of Tripoli.

The Sahara, or Great Desert, occupies about one-fifth of Africa, and is more than half as large as the United States. It is a region of intense heat in summer, containing a few scattered inhabitants, who wander with their herds from oasis to oasis, and plunder the caravans when opportunity offers.

The simoom, a scorching wind which rises in the Desert and sweeps the sand before it in suffocating masses, sometimes proves fatal to caravans. Crossing the Mediterranean, this wind appears in Italy as the Sirocco—modified in violence and deadly effect, but still hurtful to health and vegetation. A similar wind in Guinea is called the Harmattan.

Egypt, once the most powerful and civilized country in the world, and still the most important division of Africa, has recently annexed large tracts on the south, so that it now extends to the equator. It is an absolute hereditary monarchy, under a ruler styled the Khedive (*ke̦-deev'*), who pays tribute to the Sultan of Turkey. Grain, sugar, cotton, indigo, etc., are raised in the fertile strip which borders the Nile.

Egypt is the most progressive country of Africa. Improved methods of tilling the soil and manufacturing have been introduced; government schools have been established; telegraph-lines and 1,100 miles of railroad have been constructed.

Most of the people, however, are still ignorant and superstitious. Slaves are numerous. Arabs, Turkish officials, negroes, and mixed races, mainly Mohammedans—with Copts, descended from the ancient Egyptians—compose most of the population.—(On recent improvements, *consult* "*The Khedive's Egypt*," *p. 362*).

The great pyramids, still standing near the Nile, and the stupendous ruins of palaces and temples on its banks, bear witness to the architectural skill of the ancient Egyptians. The hieroglyphics, or picture-writing, with which many of these interesting remains are covered, have been interpreted, and carry back the history of the nation to a period 2,500 years before the Christian Era.

The leading exports are cotton, cotton-seed, and grain, of which England takes the greater part. The Suez Canal (*see opposite column*), by means of which the voyage between Europe and India has been greatly shortened, passes through Egyptian territory.

CAIRO (population, 327,462), a celebrated seat of Mohammedan learning, is the capital; Alexandria is the principal seaport; both are connected by railroad with Suez, the southern terminus of the canal.

EASTERN AFRICA.

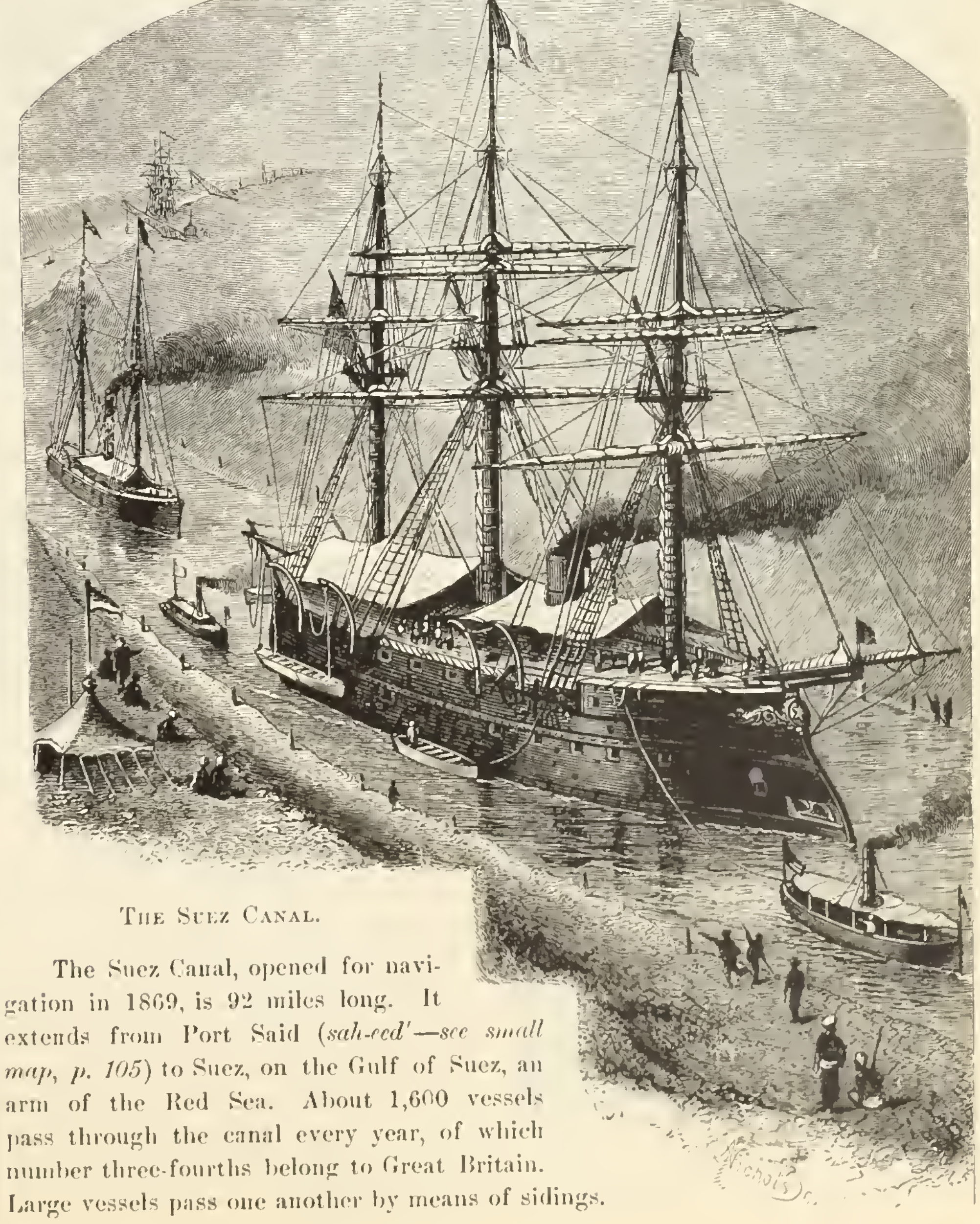
Abyssinia is a country of Eastern Africa, inhabited by a barbarous and warlike people belonging mostly to the Caucasian race. They profess a form of Christianity, but are addicted to many revolting practices. The government is despotic. Agriculture is rudely conducted in the valleys, millet and other grains, cotton, sugar-cane, etc., being cultivated. Coffee grows wild. Pastoral pursuits prevail in the mountainous regions. Trade and manufactures are generally neglected; but coffee and gums are sold to Arab traders, and cotton goods are made in large quantities. In some districts salt is used for money. GONDAR is the capital.

The Eastern Coast of Africa, from the Gulf of Aden to Delago'a Bay, belongs to different native tribes, for the most part herdsmen. The three principal divisions (*see map, p. 105*) are,

1. Somauli, rich in myrrh and frankincense.
2. Zanguebar (*zang-gay-bar'—land of the negro*); here the tribes of the interior are independent, while those on the coast acknowledge the authority of the Sultan of Zanzibar'. The dominions of this prince consist of several islands, and his residence is at ZANZIBAR, on an island of the same name. The commerce, mostly in the hands of Hindoo and Arab traders, is important, furnishing large supplies of ivory, gum-copal, and cloves.
3. Mozambique, containing several Portuguese settlements, the chief of which is MOZAMBIQUE, the residence of the governor-general. Ivory is the staple; turtles abound on the coast, and tortoise-shell is exported.

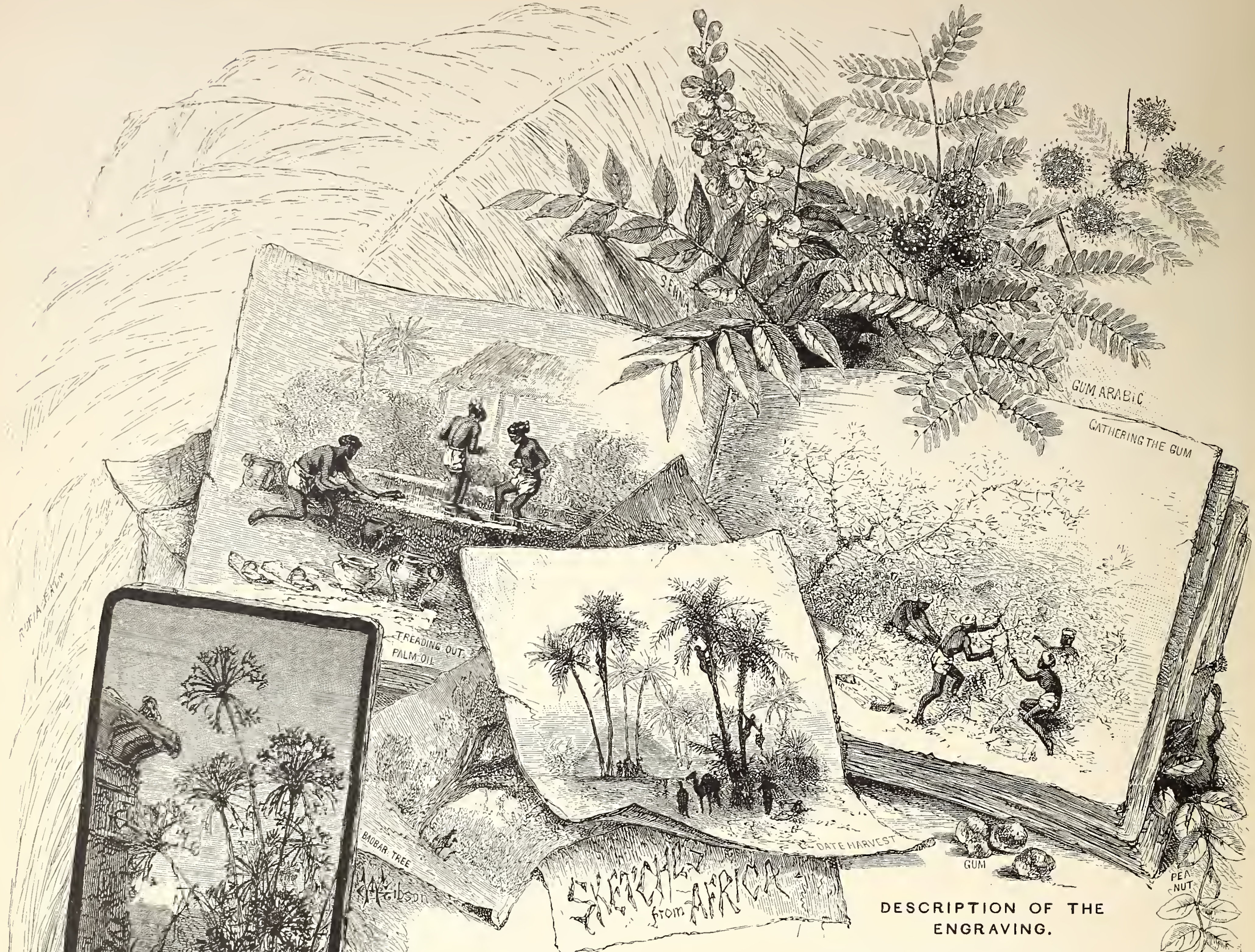
SOUTHERN AFRICA.

British Possessions.—Great Britain is the controlling power in Southern Africa. Cape Colony, to which British Caffraria, Basu'to-Land, and Griqua (*gre'kwa̤*) Land West are attached, and the colony of Natal (*nah-tahl'—see map, p. 105*) are among her important possessions. Transvaal (*trans-vahl'—beyond the Vaal*), which was for a time annexed to Great Britain, has again become an independent republic; recent discoveries of gold and other mineral deposits have given it importance. It is peopled mainly by Boers, farmers of Dutch descent. PRETORIA is its capital.



THE SUEZ CANAL.

The Suez Canal, opened for navigation in 1869, is 92 miles long. It extends from Port Said (*sah-eed'—see small map, p. 105*) to Suez, on the Gulf of Suez, an arm of the Red Sea. About 1,600 vessels pass through the canal every year, of which number three-fourths belong to Great Britain. Large vessels pass one another by means of sidings.



Cape Colony is particularly adapted to sheep-raising, and wool is the staple export. Other valuable exports are diamonds and copper-ore; also ostrich-feathers, obtained from tame birds, the raising of which has become an important branch of industry. Since 1871, the mines of Griqua-Land West have yielded diamonds to the value of $50,000,000.

Europeans constitute nearly one-third of the population. The natives include Caffres and Hottentots—the former a vigorous race, whose wealth consists in cattle. Schools have been established in Cape Colony, and about six hundred miles of railroad are in operation. Cape Town, at the base of Table Mountain, is the capital.

Caffraria and Zululand are native states, nominally independent. The Orange River Free State is a republic, in which the ruling people are Boers. It is a productive agricultural country, and is rich in minerals. Bloemfontein (*bloom-fon'tine*), on a branch of the Vaal River, is the capital.

DESCRIPTION OF THE ENGRAVING.

In the engraving above, is represented the process of obtaining oil from the fruit of the oil-palm of Western Africa. After its husky covering is loosened, the fruit is thrown into vats full of water, and negro women tread out the oil.

The natives call the oil-palm their *Friend*. They use the oil as butter, and make from different parts of the tree various utensils and articles of dress. The palm-oil of commerce is used in the manufacture of perfumery, soap, and candles, and for lubricating machinery.

Another valuable tree is the date-palm of Northern Africa. In Egypt, the harvest of its delicious fruit is celebrated every year with feasting and merry-making. It furnishes timber, thatch, materials for cordage, etc. In Madagascar, the Rufia-palm is no less useful. From the inner fibers of its leaves cloths are woven.

From the branches of the acacia, whose delicate leaves and blossom are shown above, gum-arabic exudes; and senna (cassia-leaves) is used as medicine. Peanuts are raised in large quantities on the western coast.

Among the characteristic Egyptian plants is the lotus, a beautiful water-lily, the roots and seeds of which are eaten. The papy'rus formerly abounded on the banks of the Nile, and still grows in Abyssinia. It is from this plant that *paper* gets its name, the paper of antiquity having been prepared from its inner bark.

WESTERN AND CENTRAL AFRICA.

Western Africa is mostly a region of dense forests. The climate is excessively hot, and in some parts deadly to Europeans; yet the British, Portuguese, and French, have settlements on the coast. The native inhabitants are negroes, generally fierce and warlike; they are acquainted with some simple manufactures, and subsist on the products of their flocks and herds, on the fruits which nature supplies, and the yams, millet, etc., which they raise. They meet European traders, and exchange their palm-oil, gums, ivory, and gold-dust, for firearms, knives, liquors, etc.

Guinea is the general name applied to a large part of the western coast, lying on both sides of the equator. On the northwestern coast of Guinea is Liberia, a republic originally established for freedmen from the United States. Its capital is MONROVIA, named after President Monroe, during whose administration the first colonists were sent over. Northwest of Guinea is Senegambia, on the coast of which is the small British colony of Sierra Leone (*le-o'ne*), founded as a place of refuge for negroes taken from slave-ships. FREE TOWN is the capital.

Central Africa.—Soudan, an extensive and fertile country east of Senegambia, is thickly peopled by nations having large towns, carrying on commerce, and superior to the negro inhabitants of other parts of Africa. Of the equatorial regions south of Soudan, little was known before Stanley's explorations in 1877; vast tracts are still unexplored. The natives generally are ferocious savages, subsisting principally by hunting and on the products of their herds. Some of the tribes are cannibals.

Questions.—Name and describe the Barbary States; their inhabitants; commerce; capitals. Give an account of the Sahara; the simoom. What was formerly the condition of Egypt? What monuments of its ancient greatness remain? What is the government? What marks of progress are noticeable? Of whom is the population composed? What are the leading exports? The chief cities? Give an account of the Suez Canal.

State what you know about Abyssinia; its productions; industrial pursuits. By whom is Eastern Africa occupied? Name its three principal divisions, and give an account of each. What is the controlling power in Southern Africa? What possessions has Great Britain there? Give an account of Cape Colony. Of the Orange River Free State. Of Western Africa. Liberia. Sierra Leone. Soudan. The equatorial regions of Central Africa.

Name the loftiest mountain of Africa; the chief volcano; longest river; largest lake; deserts; republics. Name the principal physical divisions of Asia; its chief mountain-ranges; loftiest peak; largest river.

PRINCIPAL COUNTRIES OF AFRICA.

Name.	Sq. Miles.	Population.	Capital.	Government.
Morocco........	259,600	6,000,000	Morocco, Fez....	Absolute monarchy
Algeria....	122,914	2,867,626	Algiers...	Colony of France
Tunis..........	45,700	2,100,000	Tunis..........	Absolute monarchy
Tripoli (inc. Fezzan and Barca)	344,500	1,010,000	Tripoli.	Despotism; province of Turkey
Egypt..........	1,153,000	17,400,000	Cairo..........	Absolute monarchy
Abyssinia.......	158,000	4,000,000	Gondar.........	Absolute monarchy
Cape Colony....	199,950	780,757	Cape Town......	British colony
Natal..........	18,750	364,338	Pietermaritzburg	British colony
Orange River F. S.	42,500	133,518	Bloemfontein....	Republic
Liberia.........	9,700	1,068,000	Monrovia.......	Republic
Sierra Leone...	468	38,936	Free Town......	British colony
Ashan'tee......	75,000	3,000,000	Coomassie......	Abs. mon. (negro)
Daho'mey.......	14,300	200,000	Abomey'.......	Abs. mon. (negro)

OCEANIA.

Area, 4,216,600 square miles. Population, 39,200,000.

Oceania, the sixth Grand Division, is composed of islands situated in the Pacific, and between the Pacific and Indian Oceans. Together these islands have an area one-sixth larger than that of the United States, while their population is about three-fourths that of the latter country.

In both size and population Oceania ranks fifth among the Grand Divisions.

The Islands.—Some of the islands of Oceania are of volcanic origin, and a number of them—Java (*jah'vą*), Sumatra (*soo-mah'trą*), the Philippine Islands, etc.—contain active volcanoes. Others are coral formations; and many of the volcanic islands are surrounded by coral reefs dangerous to navigation.

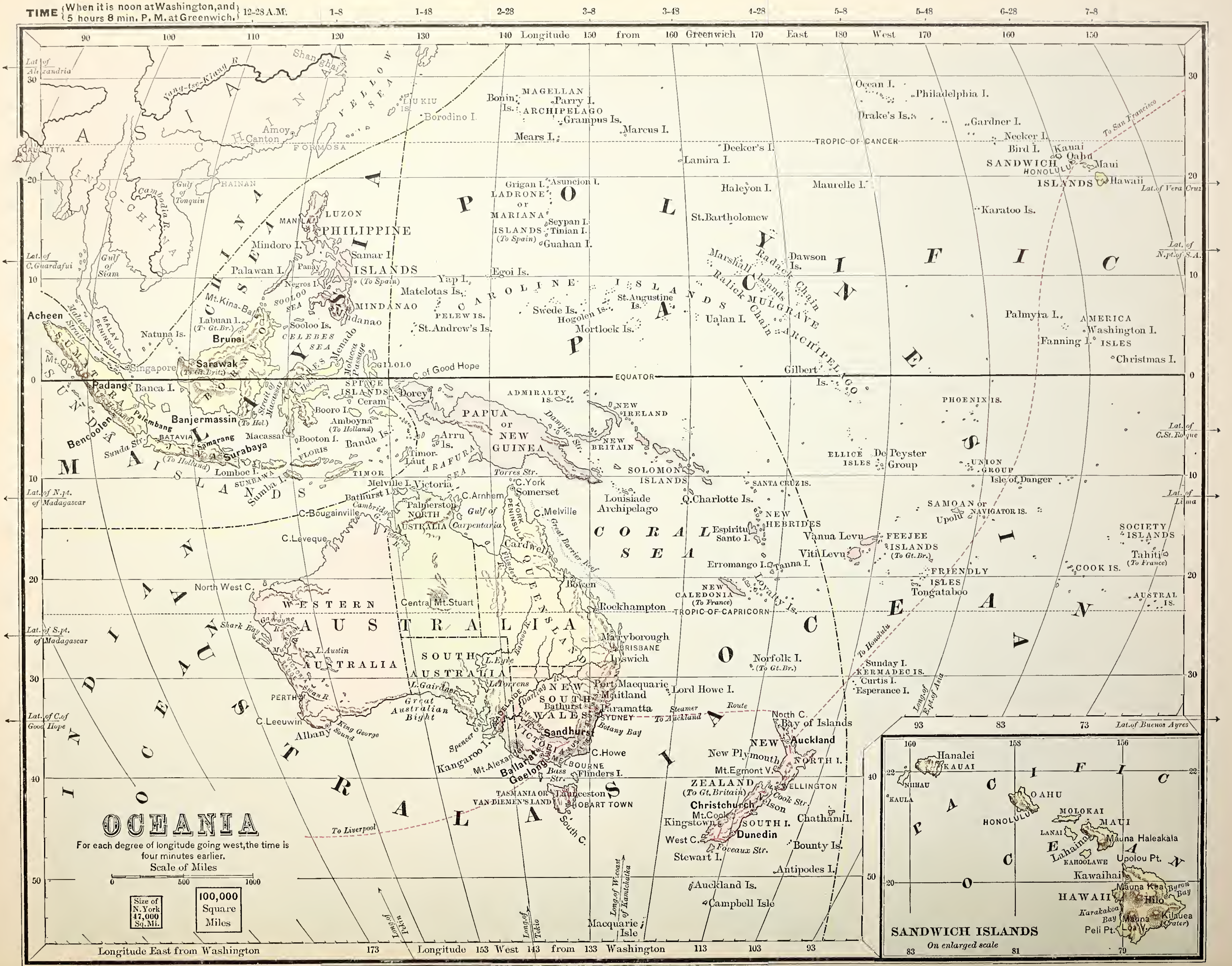
SPICES.

The spices of commerce are largely cultivated in the islands of Oceania. Cloves are the flower-buds of an evergreen tree; they are gathered when green, and smoked on hurdles over a slow fire. The nutmeg is incased in a black shell, encircled with mace; the fruit is harvested twice a year. The great pepper-producing country is Acheen', in northern Sumatra. The vines are sometimes trained on poles, and attain a height of twenty feet.

Coral reefs and the foundations of coral islands are composed of the skeletons of minute marine animals, called pol'yps, myriads of which inhabit the tropical seas. These polyps secrete, from the sea-water in which they live, a limy substance which serves them as a skeleton, and which we call coral. They multiply rapidly, not only by eggs but by budding like plants; and out of the skeletons of successive generations masses of rock by degrees grow up to the surface of the sea.

Here the reefs stop, for the polyps can not live out of water. But in some cases, under the action of the waves and through other agencies, the upper parts of the structure are broken up into small fragments, which are washed up on the top of the reef and gradually form a soil.

Seeds are transplanted thither by the currents or by birds; and under the influence of a warm and moist climate, vegetation soon crowns the newly-formed island, the majestic cocoa-palm being a characteristic ornament.



OCEANIA

For each degree of longitude going west, the time is four minutes earlier.

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Thus are formed coral islands, particularly numerous in the Pacific and Indian Oceans. They seldom have an elevation of more than ten feet, and are usually circular in form. In many cases they consist of a ring encircling a central lagoon, or portion of the ocean; vessels enter through a passage in the ring, and find a secure harbor within. Such islands are called *Atolls'*. (*See engraving, p. 115.*)

Coral islands often form extended archipelagoes. The Caroline Islands, for instance (*refer to the map and describe their situation*), embrace no less than sixty groups of atolls, scattered along for a distance of twelve hundred miles.

Long coral reefs sometimes run parallel to the coasts of islands. The Great Barrier Reef, on the northeastern coast of Australia (*find it on the map*), rises from very great depths, and is a thousand miles in length. Against this wall of coral the breakers dash with tremendous force and with the roar of thunder, forming a continuous cataract of foam.—(For further information on this subject, *consult Dana's " Corals and Coral Islands," p. 128.*)

People.—The natives of Oceania belong mainly to the Malay race. The greater part are either Pagans or Mohammedans; some have been Christianized.

The islanders generally are fond of the sea and are good sailors. Some of them are gentle and intelligent, and have made considerable progress in civilization, tilling the soil and displaying skill in various manufactures. Others are revengeful, treacherous, and so savage that they even feast on the flesh of their captives. Piracy is not uncommon.

Divisions.—Oceania consists of three divisions:—

1. Malaysia, also called the Malay and the East Indian Archipelago, embracing Sumatra, Java, Borneo, and other islands lying between Asia on one side, and Australia and Papua, or New Guinea, on the other.

2. Australasia, including Australia, New Zealand, and Papua, together with adjacent islands.

3. Polynesia, which is composed of the many islands of Oceania not included in the above divisions. The name means *many islands*.

Questions.—Name the sixth Grand Division. Of what is Oceania composed? How does it rank in size and population? Into what two classes may the islands of Oceania be divided? Name some of the volcanic islands. Of what are coral reefs and the foundations of coral islands composed? How are they formed? What is meant by an Atoll? What do coral islands often form? Give an example. Describe the Great Barrier Reef. Describe the people of Oceania. Name and define the three divisions of Oceania.

MAP QUESTIONS ON OCEANIA.

Malaysia.—Name the chief islands of Malaysia. In what zone is Malaysia? Which of its islands are crossed by the equator? What strait separates Sumatra from the Malay Peninsula? Find the length of Sumatra with the scale of miles. Name three seaports of Sumatra.

What island of the Sunda group lies next to Sumatra? To what European power does Java belong? What is the capital of Java and of the Dutch East Indian possessions? Name the largest island of Malaysia. To what two European powers do parts of Borneo belong? Mention the three principal ports of Borneo.

What strait is between Borneo and Celebes (*sel'e-biz*)? What islands are separated by the Molucca Passage? To what group does Gilo'lo belong? In what part of Malaysia are the Philippine Islands? To what power do they belong? What is their capital? Describe the situation of Banca, which yields the best tin in the world.

Australasia.—Name the principal islands of Australasia. Which is the largest? The next largest? The third in size? Name in order the coast-waters of Australia, beginning at the north. Where is Central Mount Stuart? Where is North Australia? The other five divisions are British colonies; name them, and the capital of each.

Describe the Murray River. The Darling River. Mount Alexander. The Australian Alps. Lake Eyre (*air*), which is about half as large as Massachusetts. Describe the situation of Tasmania (*taz-may'ne-a*), the seat of a British colony. What other name has Tasmania? What is its capital?

In what direction is New Zealand from Australia? Name the three islands that compose New Zealand. To what country do they belong? What is the capital of New Zealand? Name the other chief ports. What volcano is on North Island? Where is New Caledonia, a convict-colony of France? In what zones is Australasia?

Polynesia.—Over what parts of Oceania does Polynesia extend? In what zones is Polynesia? Mention some of the principal groups north of the equator; south of the equator. To what country do the Ladrone Islands belong? The Feejee Islands, whose inhabitants were once cannibals?

To what group does the beautiful island of Tahiti (*tah-he'te*) belong? It is ruled by native queens, under the control of what country? Where are the Sandwich Islands, the most important group of Polynesia? What is their capital? What volcano, having the largest known crater, is on the island of Hawaii (*hah-wi'e*)?

MALAYSIA.

Surface, etc.—The largest islands of Malaysia are mountainous. The Sunda Islands, forming the principal group of the Archipelago, are noted for their volcanoes and frequent earthquakes. The surrounding seas being comparatively shallow, Asia and Australia seem to be connected by a submarine plateau, rising above the general level of the bottom of the ocean.

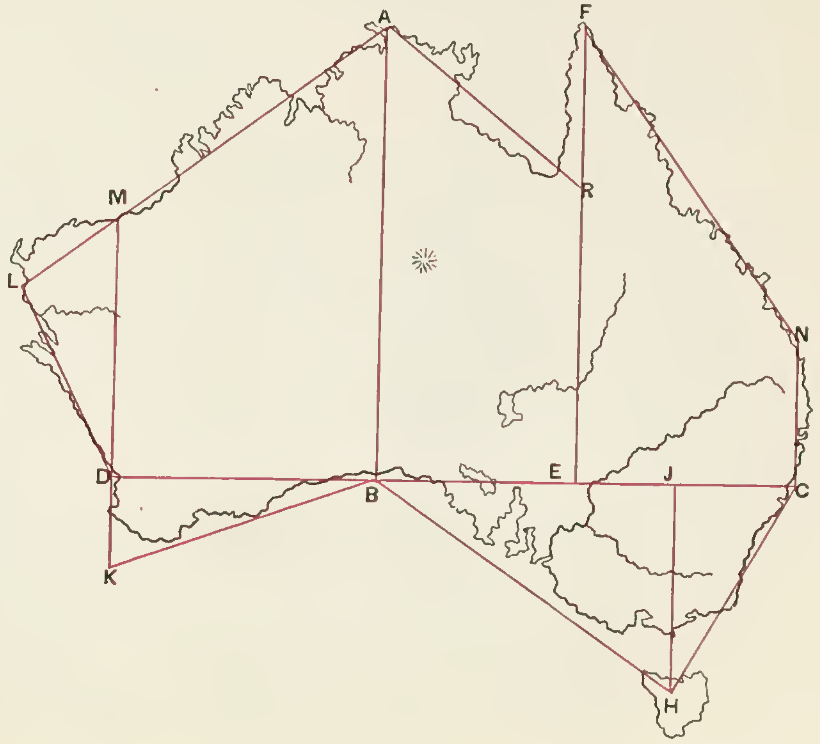
Climate.—Vegetation.—Except in the elevated districts, the climate is hot; and in the moist lowlands it is unhealthy. The soil is extremely fertile, and, owing to the heat and abundant moisture, vegetation is most luxuriant. Rice is the chief grain; sugar-cane, coffee, indigo, sago, yams, and a variety of delicious fruits, are raised in profusion.

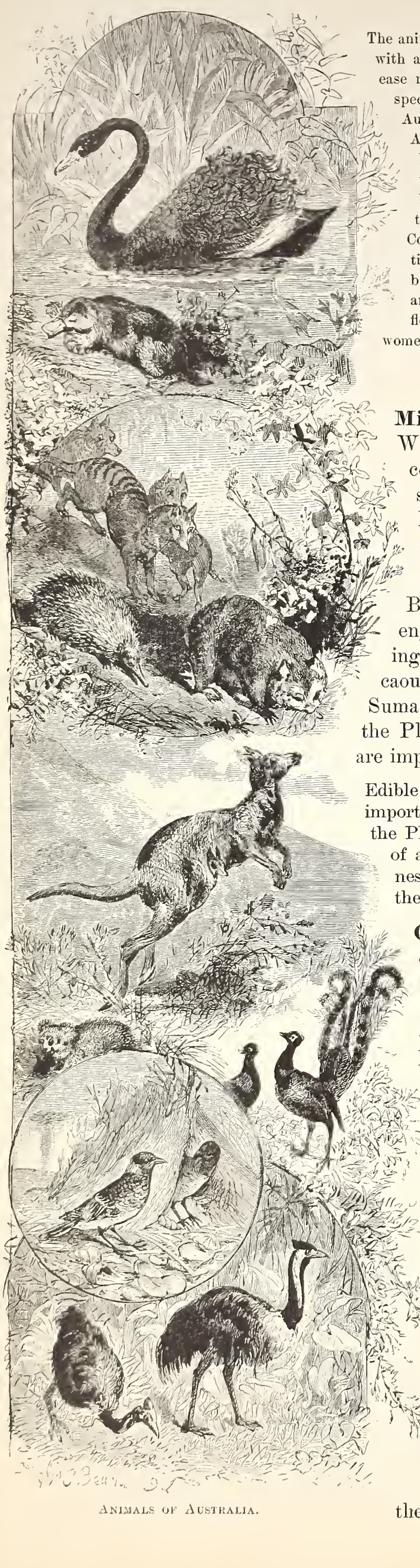
This is the great spice-region of the world. The forests yield gutta-percha, caoutchouc, and various valuable dye-woods, besides teak-timber, ebony, and the fragrant sandal-wood. The cocoa-palm abounds here and in all parts of Oceania; an oil pressed from the pulp of the cocoanut is burned for illuminating purposes throughout the Pacific Islands.

DIRECTIONS FOR DRAWING AUSTRALIA.

Draw the vertical line A B = 1,500 mi.
Draw the horizontal lines B C = 1,350 mi., B D = 850 mi.
Take B E = 650 mi., and E J = 300 mi.
Draw the vertical lines J H = 700 mi., C N = 450 mi., E F = 1,500 mi., E R = 950 mi., D K = 250 mi., D M = 850 mi.
Draw A R, F N, C H, H B, B K, and A M.
Continue A M to L, making M L = 350 mi.; and draw D L.

Draw the outline. Insert the Murray and Darling Rivers; Lake Eyre; the Australian Alps and Central Mount Stuart; the Great Barrier Reef; and the cities of Melbourne and Sydney.—Draw the outline of Tasmania.





ANIMALS OF AUSTRALIA.

DESCRIPTION OF THE ENGRAVING.

The animals of Australia present some marked peculiarities. The swan, in other parts of the world white, is here black, with a blood-red bill. Near the black swan in the engraving is the duck-bill, or ornithorhyn'cus, which can with equal ease run on land and swim in the water, climb trees and dig a burrow in a river-side. In the next vignette we have specimens of the fierce Tasmanian or zebra wolf—the echidna (*e-kid'na*), or porcupine ant-eater—and the wombat, or Australian badger.

A doe-kangaroo is next shown, with her little one looking out of the remarkable pouch in which it is carried. The kangaroo, with the aid of its long hind-legs, can leap fifteen feet or more. It is hunted by both the natives and the English settlers; its flesh is valued for food, and its skin for leather, which is used for gloves and shoes. Just below the kangaroo is a koala (*ko-ah'la*), or little Australian bear, characterized by long tufts of hair upon its ears; the food of this animal consists chiefly of the young leaves, buds, and twigs, of the gum-trees.

Conspicuous among the birds of Australia is the lyre-bird of New South Wales, so called from the shape of its beautiful tail. In the circle near it is a pair of bower-birds. One is peeping out of its nest, a bower which they have built of twigs and grass, and adorned at its entrance with bones and shells gathered from far and near; their bowers are sometimes three feet long. The e'mu, shown at the bottom of the column, attains a height of six feet. Its flesh is much prized by the natives of the interior, who reserve it for the counselors and warriors, not permitting women and boys to partake of it. Like the ostrich, it lays its eggs in a hole which it makes in the sand.

◆

Minerals. — Malaysia is rich in minerals. With the exception of Java, the larger islands contain gold, copper, iron, and tin. Quicksilver occurs in Borneo and the Philippine Islands, and diamonds are found in Borneo and Celebes.

Commerce.—Holland, Spain, and Great Britain, having possessions on these islands, engross most of the trade. Among the leading exports are spices—coffee, from Java—caoutchouc, gutta-percha, and camphor, from Sumatra—sugar, manila hemp, and tobacco, from the Philippine Islands. European manufactures are imported.

Edible birds'-nests (the nests of sea-swallows) are an important article of export from Java, Borneo, and the Philippine Islands. The nests are about the size of a coffee-cup, and are much prized by the Chinese, who use them in the preparation of soups; the finer sorts sell for twice their weight in silver.

Colonial Possessions. — A great part of the Malay Archipelago belongs to Holland. The colonial possessions of this country include Java, Celebes, the Spice Islands or Moluccas, Banca, and parts of Sumatra, Borneo, and Timor'. BATA'VIA is the residence of the governor-general, and the center of an extensive commerce.

The Philippine Islands are a colonial possession of Spain. MANILA (*mah-ne'lah*), the seat of government, is largely engaged in commerce, and in the manufacture of cigars, cordage, embroidered fabrics from the fibers of the pineapple-leaf, etc.

Part of the coast of Borneo is under control of the British.

Independent native tribes occupy the interior of the large islands. The Javanese, Sumatrans, and Borneans, are mostly Mohammedans; but the Dy'aks, the largest and most powerful tribe of Borneo, are Pagans.

Malaysia contains the greater part of the population of Oceania.

AUSTRALASIA.

Australia (*southern land*—area, 2,972,350 square miles—population, 2,850,000) is the largest island in the world; its area about equals that of the United States exclusive of Alaska. It has a coast-line of 8,000 miles; there are few indentations, except on the north.

The interior, as far as known, consists mostly of treeless plains, some of which are covered with tall grass, while others are sandy and barren. These plains are bordered on the east by a succession of mountain-ranges, the loftiest of which is known as the Australian Alps (highest summit, 7,176 feet). Lower highlands border the central plains on the west. The only important streams are the Murray River and its tributaries.

In the northern part the climate is exceedingly hot; in the interior, dry. In New South Wales, long droughts are of frequent occurrence, and in the rainy season floods often damage the country.

The vegetation is peculiar. The trees, mostly evergreens, do not stand close together so as to form dense forests; the leaves, turning their edges instead of their sides to the sun, afford little shade. Very few of the native fruits or roots supply food for man; but wheat, maize, the vine, the mulberry, and in the north cotton, sugar-cane, and tropical fruits, have been introduced with success.

Stock-raising.—There is an abundance of the best of pasture-land. Sheep-raising is the leading branch of industry. Cattle are numerous, and horses are bred in great numbers for exportation to India.

Minerals.—The mineral treasures of Australia are rich and varied. Her gold-mines, in the value of their yield, are sur-

Coast of New Guinea. An Atoll. Hunting the Kangaroo. Dyak
Feejee-Islander. Maori Village, New Zealand. Native Australian. Village in Borneo. Warrior of Borneo.

SCENES IN OCEANIA.

passed only by those of the United States. There are also abundant supplies of copper, iron, tin, lead, silver, and coal.

Colonies.—Commerce, etc.—Australia is the seat of five British colonies, which, with their capitals, are named first in the Table below. The European population is chiefly on the south-eastern coast. The natives, of a low grade of intellect and repulsive in their habits, are few in number and are rapidly diminishing.

Gold and wool are the staple exports. The commerce is mostly with Great Britain. Melbourne, the capital of Victoria and largest city of Australia, is the chief center of commerce. Sydney, the capital of New South Wales, is distinguished for its fine harbor.

Australia was known to the Portuguese in the sixteenth century. Early in the seventeenth century, Dutch navigators landed at different points and called the country New Holland. Colonization was not attempted till Captain Cook, noted for his exploring voyages in the Pacific, took formal possession of the island for the British crown. The first settlement was established in 1788, on the site of the present city of Sydney, as a station for convicts transported from Great Britain, and for fifty years it continued to be used for penal purposes. The adaptation of the country to wool-growing and the discovery of gold in 1851 led to a large immigration of settlers of a different character; and of late the colonies have rapidly increased in population and prosperity.

BRITISH COLONIES IN AUSTRALASIA.

Colony	Sq. miles.	Population in 1881.*	Capital.	Population of Capital.	Miles of Railroad.
Queensland.......	669,520	226,077	Brisbane.....	30,955	633
New South Wales.	310,937	750,000	Sydney......	222,133	850
Victoria..........	87,893	858,582	Melbourne ...	280,836	1,200
South Australia†..	904,133	279,865	Adelaide......	37,892	667
Western Australia.	1,000,000	30,200	Perth.........	7,000	78
Tasmania........	26,215	115,705	Hobart Town..	21,118	179
New Zealand.....	106,260	489,561	Wellington....	21,582	954

* Exclusive of natives. † Including North Australia, which is attached to it.

Tasmania and **New Zealand** are also British colonies. In the case of these, as of the Australian colonies, the governor is appointed by the British Crown, while the people are represented in at least one Chamber of the legislative body.

Tasmania is noted for its deposits of coal, iron, and other minerals, and for the excellent timber yielded by its forests; wool is the staple product and export. New Zealand is valuable for its gold, timber, wool, and "New Zealand flax". Coal is widely distributed. The natives, called Mao′ris, are the most vigorous and intelligent people of Australasia.

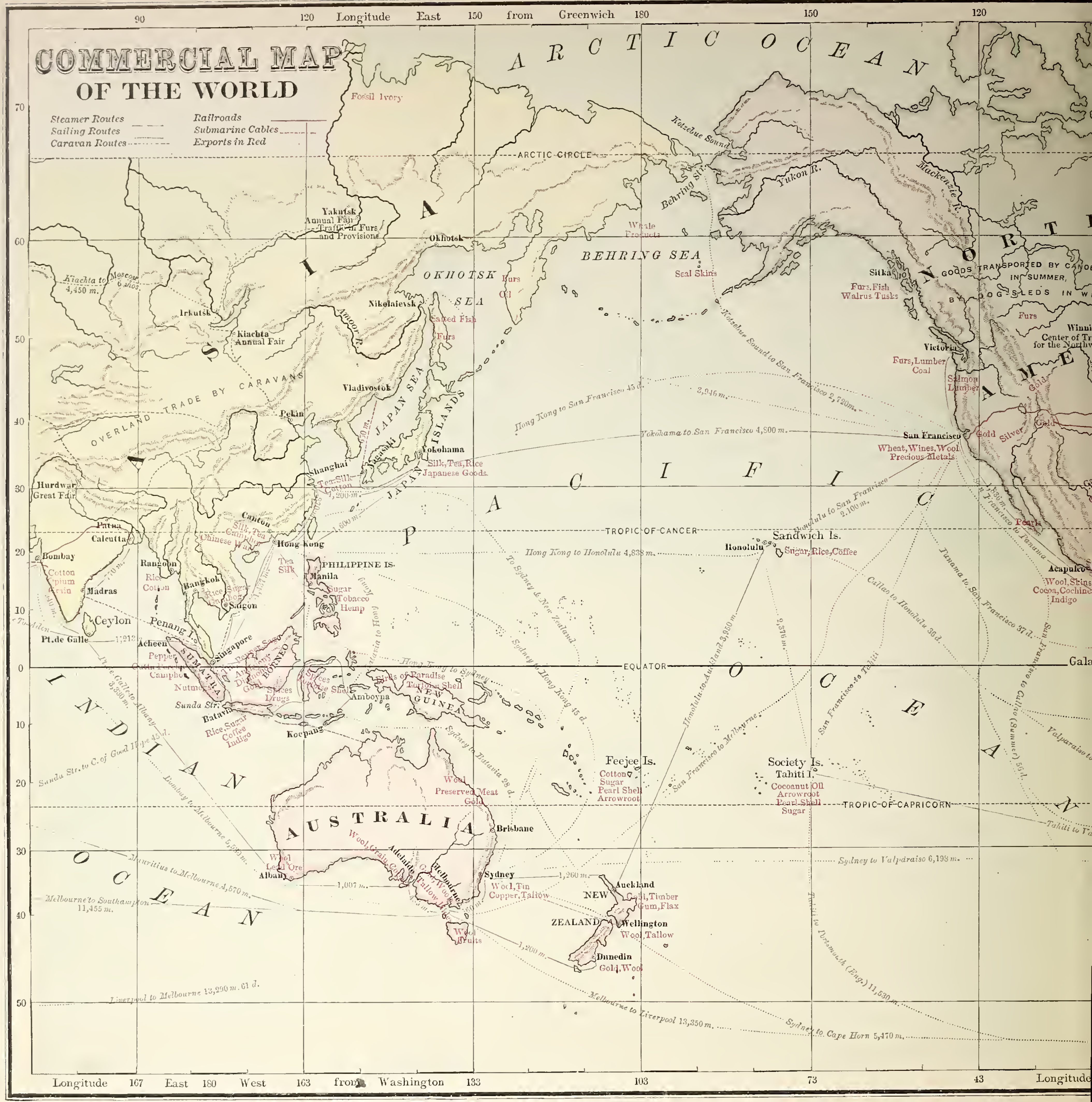
Papua, or New Guinea, ranks next in size to Australia and Borneo, among the islands of Oceania. The Dutch carry on some trade with the natives on the coast. The Papuans, whom the native Australians closely resemble, are a black and woolly-haired people, having negro rather than Malay characteristics.

POLYNESIA.

The Sandwich Islands, fifteen in number, though but eight are inhabited, constitute the Kingdom of Hawaii. The natives have embraced Christianity and learned the civilized arts. The fertile soil produces an abundance of wheat, tobacco, and sweet-potatoes, together with cotton, coffee, cacao, yams, and especially sugar-cane. Sugar is the staple export. Honolulu, the capital and chief port, is frequented by whaling-vessels, and is the seat of an extensive commerce, of which the United States engrosses the greater part.

The natives of the Feejee Islands, now under British rule, those of the Society Islands, partly under French protection, and of the Samo′an Islands, under the protection of the United States, have become Christianized, have laid aside their barbarous customs, and made considerable progress in civilization.

Throughout southern Polynesia the bread-fruit is the main dependence of the islanders.



Mercator's Projection.—The above map is on what is called "Merca'tor's Projection". It represents the earth's surface expanded as it would have to be to coincide with the interior surface of a hollow cylinder* enveloping the globe and touching it at every point of the equator.

The meridians are thus converted into parallel lines. The degrees of longitude, instead of diminishing as we leave the equator are increased to a uniform length, and the degrees of latitude are increased in the same proportion as the corresponding degrees of longitude. The consequence is that the size of countries in high latitudes, north or south, is greatly exaggerated; as will be seen by comparing the northern part of North America, as shown above, with the correct representation of the same in the map on p. 19. Yet the exact direction of one place from another is shown, and hence charts on Mercator's projection are used by navigators.

Chief Exports.—*From Boston and Portland:* Breadstuffs, provisions, ice, mfts.
From New York: Breadstuffs, provisions, cotton, petroleum, manufactures.
From Philadelphia: Breadstuffs, petroleum, coal, provisions, cotton, tobacco, mfts.
From Baltimore: Breadstuffs, tobacco, cotton, provisions, canned goods, mfts.
From Norfolk: Cotton, oysters, early fruit and vegetables, tobacco.
From Charleston: Cotton, rice, lumber, naval stores, phosphate.
From Savannah: Cotton, rice, lumber, naval stores.
From Mobile: Cotton, naval stores, lumber.
From New Orleans: Cotton, sugar, molasses, rice, breadstuffs, tobacco.
From Galveston: Cotton, cattle, hides, wool, grain.
From Chicago: Breadstuffs, provisions, live-stock, lumber, manufactures.
From St. Louis: Breadstuffs, cotton, provisions, wool, manufactures.
From Cincinnati: Pork, bacon, lard, tobacco, manufactures.
From Havana: Sugar, molasses, rum, tobacco, cigars, fruits, beeswax, honey.
From Vera Cruz: Silver, hides, cochineal, coffee, vanilla, tobacco, indigo.

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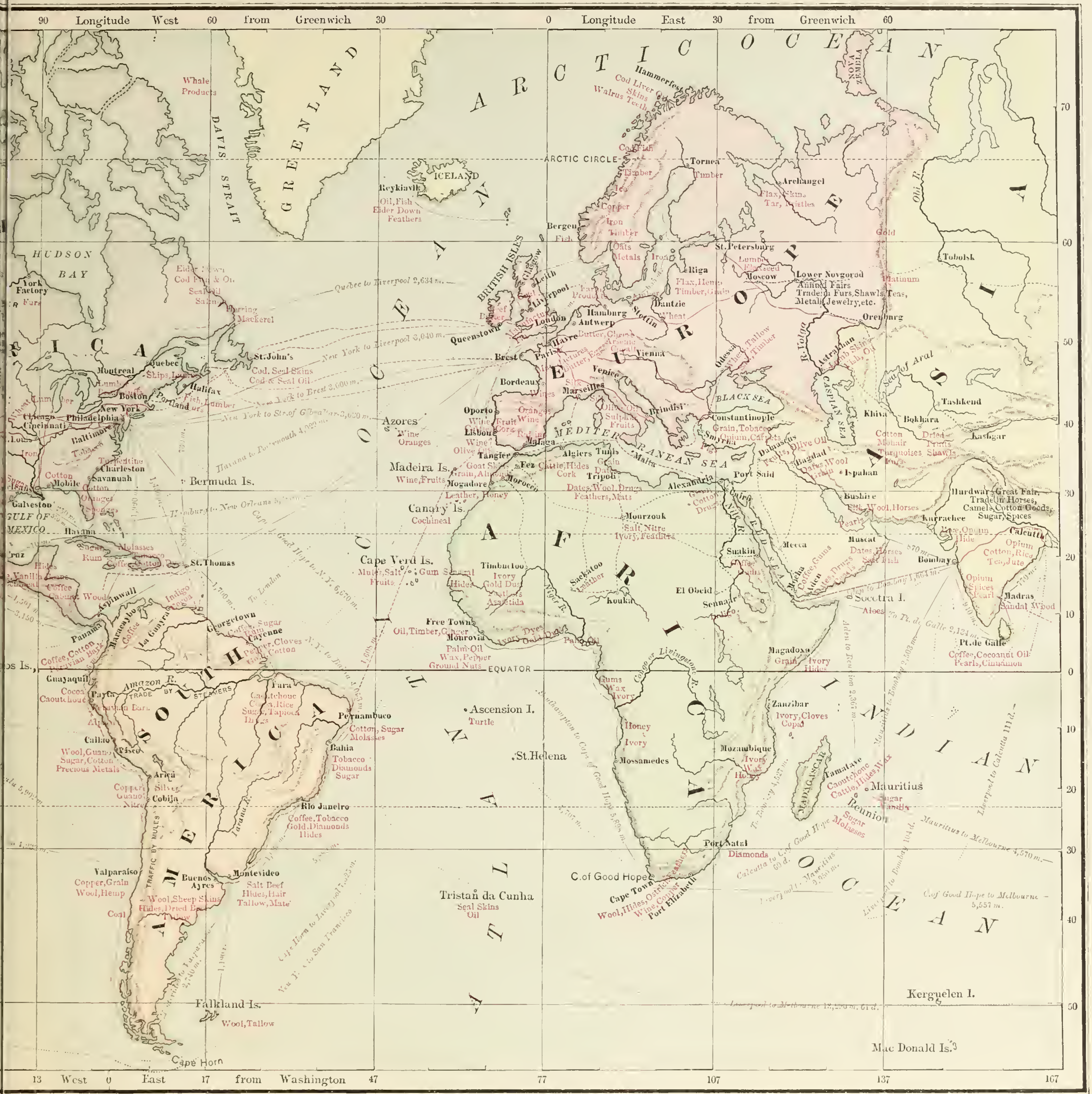
* The inner surface of a gun-barrel or of a joint of stove-pipe will serve as an illustration of the interior surface of a hollow cylinder.



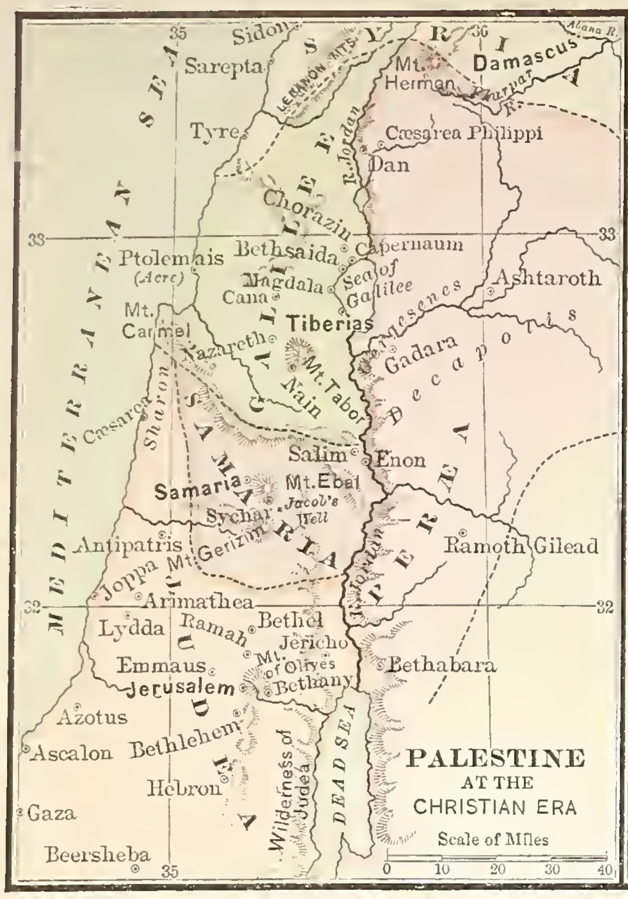
Questions on the Map.—(*Only the principal steamer and sailing routes are shown above.*) Which of the steamer-routes from America to Europe is the shortest? How long is the voyage by steamer from New York to Liverpool? How can one go from Chicago to Havana? From St. Louis to Bermuda? In what two ways can you go from New York to San Francisco? Give the distance by steamer. With what port of Japan is San Francisco connected by steamers? Describe the steamer-route from San Francisco to Australia. With what ports is Melbourne, in Australia, connected by steamers?

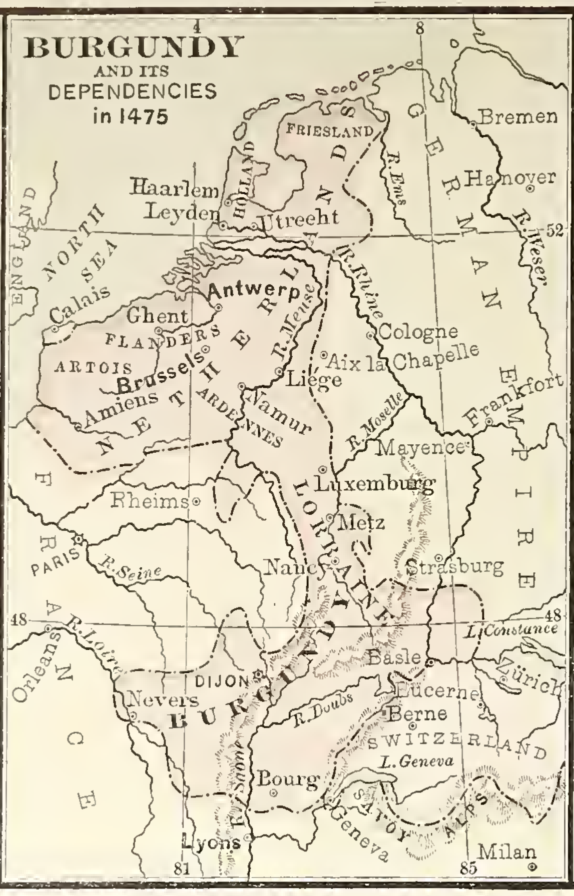
What is the route of sailing-vessels from Liverpool to Melbourne? From Melbourne to Liverpool? Why are these routes different? Between what ports do some of the principal submarine telegraph-cables extend? How are goods transported on the Amazon? How, in the Northwest Territories of Canada? Trace the caravan-route from Kiachta to Moscow; what is its length, and through what places does it pass? In what other parts of Asia is trade carried on by caravans? Describe the caravan-routes of Africa.

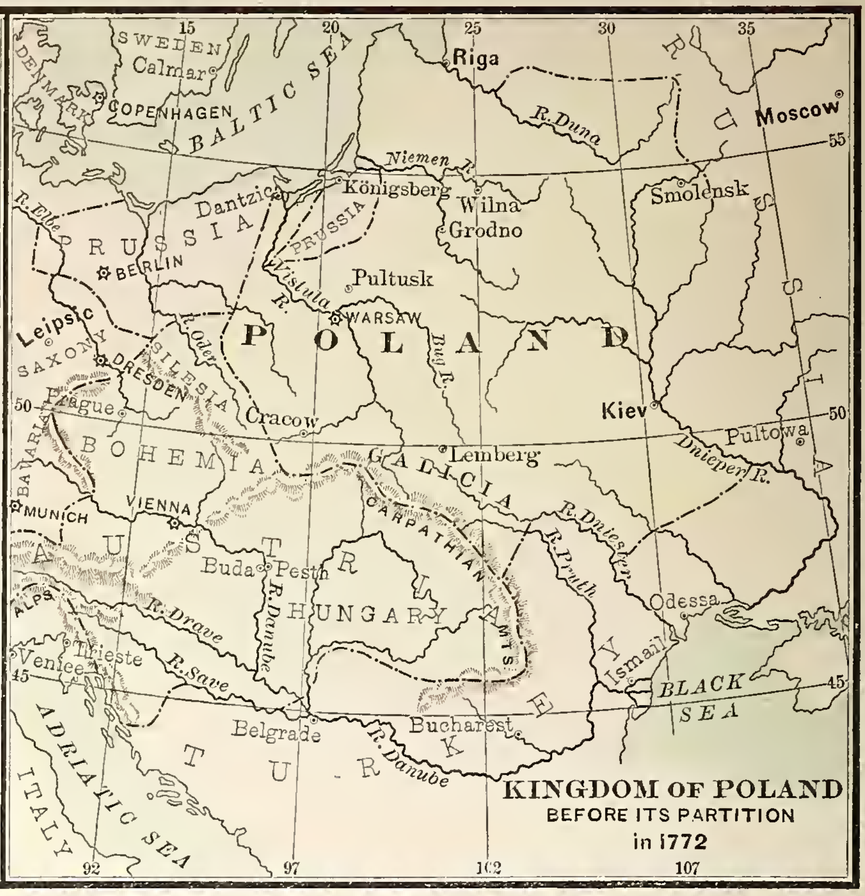
(*Refer to the Table on the opposite page, below the map.*) Name the chief shipping-ports for grain in the United States. How does the grain reach these ports (*p. 33*)? Name the chief cities of the United States that export petroleum. Rice. Tobacco. Provisions. Cotton. How does the cotton shipped from New Orleans reach that port? What city receives most of the cotton shipped from the United States to foreign ports? *Liverpool.*

(*Refer to map.*) From what American ports are fishery-products largely exported? Whence does ivory come? India-rubber? Gutta-percha? Tea? Opium? Cochineal? Where are spices obtained? Dates? Ostrich-feathers? With what is a vessel from Buenos Ayres bound for New York likely to be freighted? A vessel from Rio Janeiro bound for Mobile? A vessel from Yokohama bound for San Francisco? What would a vessel from England be likely to carry to Cape Town? Of what would its cargo probably consist on its return? What is the most direct route by water from Bombay to London? What was formerly the only route? What Atlantic port in America is the chief starting-point for European steamers?

HISTORICAL MAPS.







PALESTINE, in the time of Christ, was subject to the Romans. Cæsare'a was the leading seaport and the Roman capital. The country west of the Jordan was divided into three provinces—Jude'a, Samaria, and Galilee—having respectively Jerusalem, Samaria, and Tibe'rias, for their chief cities. The principal river is the Jordan, called "the river of the great plain"; it is two hundred miles long but nowhere navigable, and flows into the Dead Sea. This sea, occupying the site of ancient Sodom and Gomorrah, is 1,316 feet below the level of the Mediterranean; its waters are heavily charged with salts, and its shores are desolate—without a single port. Various places mentioned in Scripture will be found on the above map.

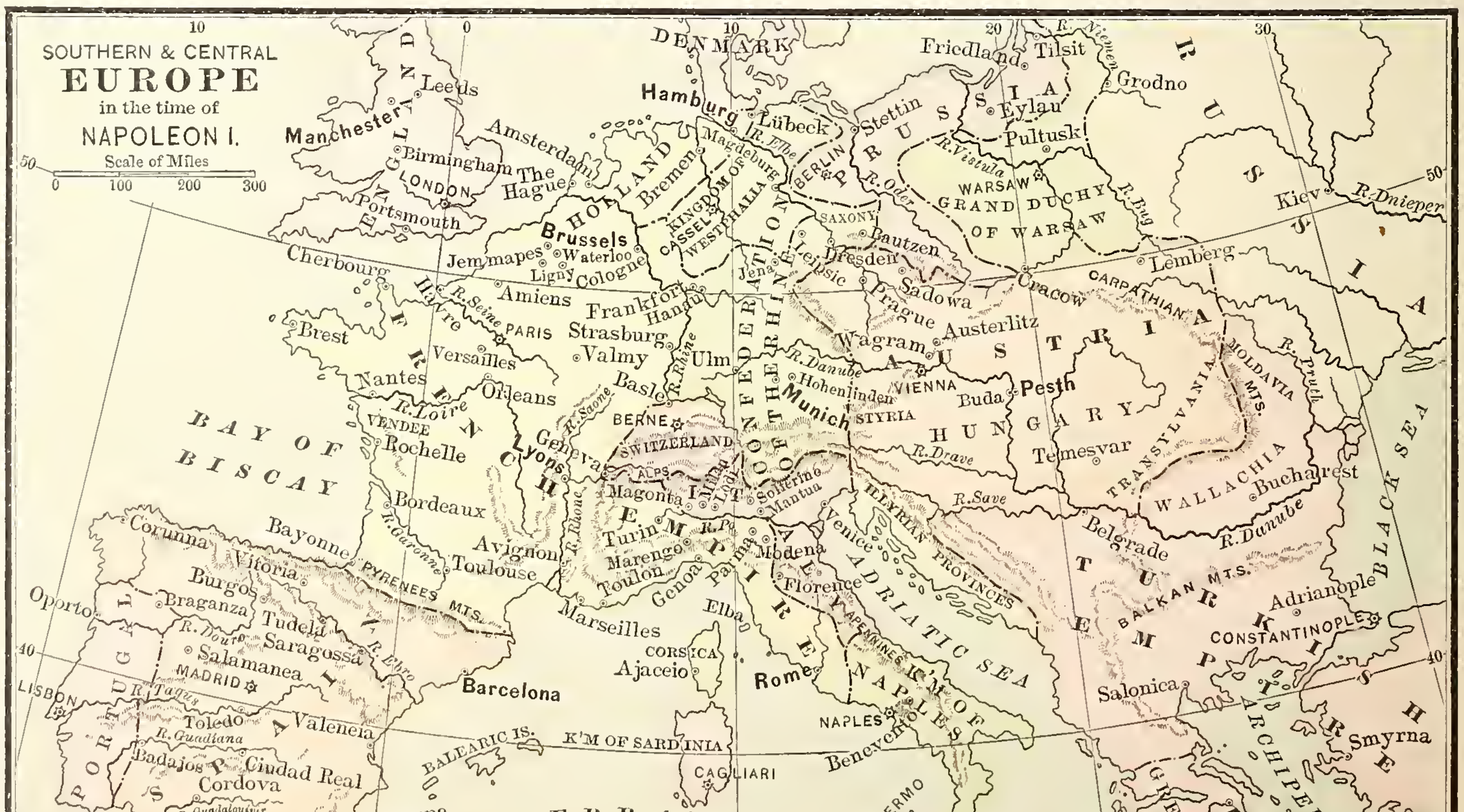
BUR'GUNDY was a duchy of Western Europe, which, toward the close of the fifteenth century, under several able princes, took a prominent place in history. Burgundy proper lay west of Switzerland, and extended to the Loire, having Dijon (*de-zhōɴ'*) for its capital. Under Philip the Good (1419–1467) and his son Charles the Bold (1467–1477), styled dukes but really possessed of kingly power, large acquisitions of territory were made, including Alsace-Lorraine and the Netherlands. On the fall of Charles the Bold the duchy was dismembered, France and Austria appropriating large portions of it. Burgundy proper is now embraced in France.

POLAND, in the first half of the eighteenth century, was a flourishing kingdom of Central Europe. It extended from the Baltic Sea to within 150 miles of the Black. Its most important cities were Warsaw, the capital, Cracow (*kray'ko*), Dantzic, and Kiev. Internal dissensions led to its destruction. Frederick the Great, King of Prussia, coveting that part of its territory which divided his dominions, secured the coöperation of Russia and Austria; and, taking advantage of the prevailing anarchy, these three powers in 1772 effected the dismemberment of Poland, each appropriating part of her soil.

In 1793 Russia and Prussia helped themselves to another portion; and the next year, in spite of the most heroic resistance, Warsaw was taken, and Poland ceased to exist as an independent country, Russia, Prussia, and Austria dividing among themselves what little territory they had before left her. What is now known as Poland is a part of the ancient kingdom, incorporated in Russia.

* * *

NAPOLEON, after his victories in 1806 and 1807, made the map of Europe anew. He enlarged the French Empire till it included the whole of the Netherlands and much of northern Italy. Naples he erected into a kingdom for his brother Joseph, its former monarch taking refuge in the island of Sicily, to which his authority was confined. The Kingdom of Sardinia was in like manner limited to the island of that name, and Cagliari (*kahl'yah-re*) became its capital. East of Holland was the Kingdom of Westphalia, created for Jerome Bonaparte. A number of the German states were united in the Confederation of the Rhine. Prussia and Russia were deprived of part of their territory, and the Grand Duchy of Warsaw revived for a time the glories of ancient Poland.—After Napoleon's downfall (1815), the old boundaries were restored.



MAP-DRAWING WITH THE AID OF PARALLELS AND MERIDIANS.

The chief object of requiring maps to be drawn in connection with the study of Geography is to familiarize the pupil with the outlines of countries and the location of places. To this end, perfect accuracy in the construction of the map is not essential; it is sufficient if the general shape of a country is impressed on the mind, together with the relative position of its principal mountains, rivers, cities, etc. This result, it is believed, will be insured by following the system presented in the preceding pages; particularly if, after the drawing has once been carefully made according to the directions given, off-hand sketches of the Grand Division or states in question, *from memory*, are called for from time to time at subsequent lessons, and, when made, corrected by a comparison with the maps.

If, however, exact accuracy of outline and location is required, regard must be had to latitude and longitude. As an assistance to those who desire to pursue the subject further—to educate the eye and hand by careful exercises in imitative drawing, as well as to construct correct and handsome maps which shall summarize the results of their geographical study—a set of blanks has been prepared,* on which the parallels and meridians are projected in correspondence with those on the maps in this work. Provided with these blanks, the pupil, after having made the approximate drawings according to the system heretofore presented, will be able to prepare finished maps of each Grand Division and section, filled out with such minuteness as may be deemed proper. A few practical suggestions may be of service :—

I. In addition to the blanks, the following articles will be needed:—a well-sharpened lead-pencil, grade No. 2 or B; a piece of India-rubber; a fine-pointed pen; a small camel's-hair pencil and a flat brush; a ruler, divided into inches, half-inches, and quarter-inches; and cakes of red, blue, and yellow paint—red and blue being mixed to produce purple, red and yellow to produce buff, and blue and yellow to produce green.

II. To draw the outline, begin with some prominent point near the upper left-hand corner of the map to be copied. Noting its distance from the nearest parallel and meridian, mark its position on the blank by making a dot with your lead-pencil at the same distance from the corresponding parallel and meridian. Passing to the right along the top of the map, locate the next prominent point of the outline in the same way, and connect the two dots with a continuous light pencil-line, copying as closely as possible the corresponding portion of the outline in the model.

Extend the outline thus from one prominent point to another, along the top of the map and down the right side. Then returning to the starting-point, proceed in the same way down the left side, and finally along the bottom of the map to the lower right-hand corner. At each step compare your outline with the model; erase with rubber whatever is wrong, and redraw it correctly. Form the habit of measuring distances with the eye, but test the correctness of your measurements, especially at first, with your graduated ruler or a slip of paper.

III. Draw interior boundary-lines next, denoting them by dotted lines; then islands, and then lakes. In every case have regard to distance from the nearest parallel and meridian; begin at the upper part on the left, and follow the order prescribed above, that the hand may not soil the map by rubbing on pencil-lines already drawn.

IV. Coloring comes next. Use one color at a time, applying it to all the parts it is to cover, and allowing it to dry before the next color is applied. A light tint is obtained by rubbing the cake of paint on a saucer with a little water, and then adding more water. Fill the flat brush with the color, and draw it quickly, *and but once*, over each part to be colored, disregarding minute indentations, which can be touched afterward with the camel's-hair pencil to better advantage. Clean your brush thoroughly before passing from one color to another.

V. When the coloring is dry, go over the pencil outline and boundaries with pen and ink. If this is done before, the ink may run when the color is applied.

VI. Next fill in the details—mountains, rivers, and towns—in this order. Locate them according to their distance from the nearest parallel and meridian—with the pencil first, that any error may be corrected by erasure and redrawing; in each case begin with the most northwesterly, and follow the order heretofore prescribed. Mountain-peaks may be represented by small circles, with very fine lines radiating from them in all directions. For ranges, imitate the mountain-work on the map, making it heavy in proportion to the height of the range; observe that the fine lines grow heavier as they converge, and generally form a series of slightly curving groups.

Rivers are represented by waving lines, gradually widening as the mouth is approached. A river should be commenced at its source, and each prominent bend should be located, as in the case of the outline, in its proper latitude and longitude.

For towns, large black dots may be used; capitals should be denoted by a capital-mark similar to that used on the map.

VII. Finally, the names must be inserted. They will generally look best, if arranged as in the model, but are likely to require more space than they there occupy. Use capitals or small letters, according as they are used on the map; some preliminary practice in the formation of printed letters will be of service.

* * *

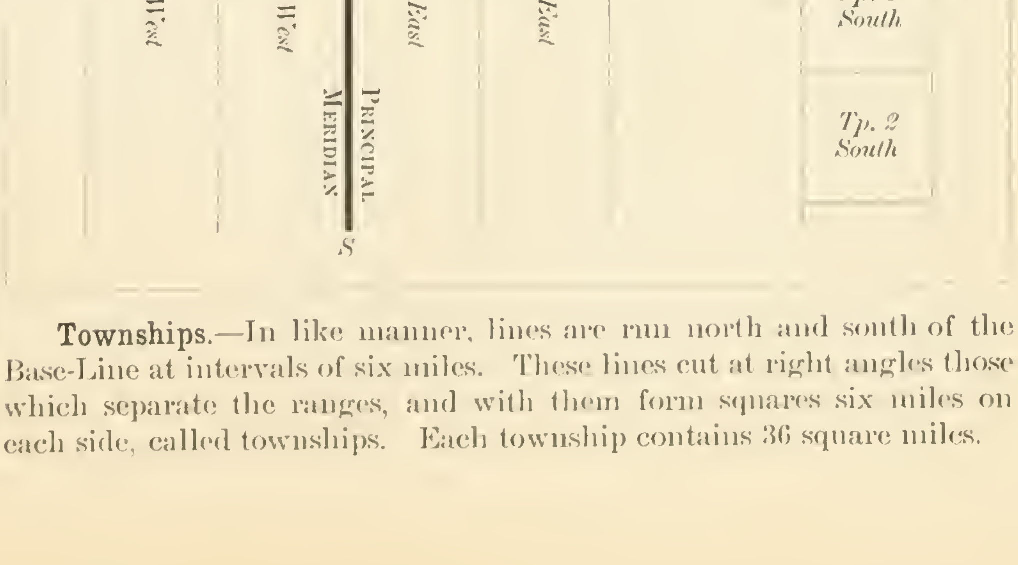
PUBLIC LANDS OF THE UNITED STATES.

SYSTEM OF SURVEY AND DESIGNATION.

The Public Lands of the United States (consisting of lands belonging to the General Government at the close of the Revolutionary War, together with territories since acquired from the Indians and from foreign powers by treaty or purchase) are divided and subdivided into tracts that are nearly squares, bounded by lines running north and south, east and west. The division is made, and the tracts are designated, according to the following system:—

Ranges.—Standard lines must first be determined, from which to measure. Accordingly, in each land-district some meridian-line is run due north and south; this is called the Principal Meridian. From some point of the Principal Meridian is also run a line due east and west, called the Base-Line.

Other lines are then run in the same direction as the Principal Meridian, at distances of six miles (measured on the Base-Line) on each side of it. The strip between the Principal Meridian and the first line thus run east of it is known as *Range 1 East;* the second strip is *Range 2 East*, etc. And so on the west; the successive strips running north and south, six miles wide, are called *Range 1 West*, *Range 2 West*, etc. This division is shown in the diagram on the left, below.



Townships.—In like manner, lines are run north and south of the Base-Line at intervals of six miles. These lines cut at right angles those which separate the ranges, and with them form squares six miles on each side, called townships. Each township contains 36 square miles.

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* Map-Drawing Blanks, to accompany Appletons' Higher Geography: consisting of Twenty-two Sheets in a Portfolio.

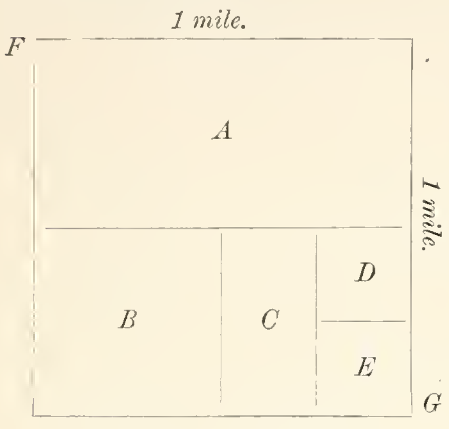
The township nearest the Base-Line on the north is known as *Township 1 North*, of whatever range it may be in; the next farther north is *Township 2 North*, of that range—and so on. In like manner, going south from the Base-Line, we have in succession *Township 1 South*, *Township 2 South*, etc. See right-hand diagram on the preceding page.

Sections.—Each township is divided into thirty-six squares, called Sections, each one mile long and one mile wide, and therefore having an area of one square mile. The sections of a township are numbered 1, 2, 3, etc., up to 36, beginning at the northeast, and running alternately from right to left and from left to right, as shown in the accompanying diagram.

A section may be subdivided into half-sections, quarter-sections, eighths, and sixteenths, designated as in the example that follows:—

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

The Sections of a Township, as numbered.



A Section, as subdivided.

Let *FG* be Section 3 of Township 2 North, in Range 1 West; then—

A is N. (north) ½ of Section 3, Township 2 North, Range 1 West.

B is S. W. (southwest) ¼ of Section 3, Township 2 North, Range 1 West.

C is W. (west) ½ of S. E. (southeast) ¼ of Section 3, Township 2 North, Range 1 West.

D is N. E. ¼ of S. E. ¼ of Section 3, Township 2 North, Range 1 West.

E is S. E. ¼ of S. E. ¼ of Section 3, Township 2 North, Range 1 West.

Correction-Lines.—If the north-and-south (meridian) lines were parallel to each other, the townships and sections would be exact squares. But as these lines gradually converge toward the north, meeting at the pole, the townships deviate somewhat from squares, being narrower on the north than on the south; and the northern sections of a township are a little smaller than the southern ones.

In order that the townships of a range may not thus keep getting smaller and smaller as we go toward the north, a new base-line, called a Correction-Line, is taken at intervals (differing in length in different land-districts), and new north-and-south lines are run at distances of six miles measured on the Correction-Lines.

The system of survey described above is not used in Texas, the Public Lands there being state property.

In a number of the states certain sections of the Public Lands have been set apart to promote the cause of education, and funds for the support of Common Schools have been formed out of the proceeds of their sale.

* * *

GEOGRAPHICAL RECREATIONS.

1. What African capital was named after a president of the United States?
2. What points of the earth's surface are nearest to the center of the earth?
3. Places on a certain meridian may be said to be in either east or west longitude from Washington; what meridian is it?
4. Mention two seas named after their explorers.
5. When it is noon at London, in what part of the world is it midnight?
6. What drug gets its name from a Mexican city?
7. Which state of the United States contains two mountains of iron?
8. Which states have capitals named after presidents?
9. Which state is divided into parishes instead of counties?
10. Which state has a capital named after a queen?
11. What two provinces have capitals named after queens?
12. What city deserves to be called the Lyons of America—and why?
13. What city manufactures more crockery than any other place in America? More flour? What city cans the most oysters?
14. In what latitude and longitude are you at the present moment?
15. What is the most northerly town in the world? The most southerly?
16. What syllable in Asiatic proper names corresponds with the termination *land* in English names?
17. What two capes of Europe have names that mean the same thing—the one an English name, the other derived from two Latin words?
18. Which is longer, a meridian circle or the equator—and why?
19. From what country does "Mocha" coffee come? "Rio"?
20. What country of South America is named after an illustrious patriot?
21. Name "the Granite State" and "the Granite City".
22. What is the highest cataract in the world?
23. At what points of the earth's surface is the time exactly the same as at St. Louis?
24. Which is nearer to Moscow, a village 3° south of that city or a village 3° east of it?
25. Name the largest city in the United States not on navigable waters.
26. Name four republics of Europe. Which is the smallest?
27. Which are the three largest empires in the world, and in which Grand Division are the largest possessions of each?
28. When it is 4 A. M. at Boston, it is 4 P. M. at a certain spot in the same latitude; how many degrees is this spot from Boston, and in what direction?
29. What African city is named after a great conqueror?
30. What European capital is named after a great sovereign?
31. What city is the greatest grain-market in the world? The greatest cotton-market? The greatest tobacco-market?
32. What Asiatic city has the largest commerce?
33. What is meant by the common expression "carrying coals to Newcastle", and why has it this meaning?
34. What mountain has the largest crater known?
35. What empire has possessions in each Grand Division?
36. What is the longitude of the North Pole?
37. How many meridians are there on the earth's surface?
38. What is the largest city in north latitude? In south latitude?
39. Name the Niagara of the Eastern Continent.
40. Why has not Africa made more progress in civilization?
41. Which is the oldest university in America? In the United States?
42. Name the largest island in the world. The largest peninsula.
43. What city was named in commemoration of a battle of the Revolution?
44. How many countries of Europe exceed the United States in population?
45. Which of the European countries are larger than California?
46. Which is the hottest city in the world? The oldest city?
47. What capital lies nearest to the equator?
48. Which of the oceans receives the most drainage, and which the least?
49. What is the prevailing form of government in the Old World? In the New World? How do you account for this difference?
50. What three Americans have had the most towns named after them?
51. What is the longest river in the largest country of Europe?
52. Mention a so-called lake that is really a gulf or bay.
53. Mention three so-called seas that are really lakes.
54. Why do the principal rivers have their sources in mountains?
55. If rain is plentiful on one side of a mountain-range and is lacking on the other side, what would you infer with regard to the prevailing direction of the winds?
56. What is the first city of the New World in commercial importance? The second? The third?
57. What great city is nearest to the geographical center of the United States?
58. Name the five largest lake-ports of the United States.
59. Name the largest city of each of the six Grand Divisions. The longest river. The highest mountain. The largest lake.
60. Which ocean is the most important commercially? The least important?
61. What religion has the most followers, and in what countries are they?
62. Name the chief commercial cities of England. The chief manufacturing cities of England. The great coal-market of England.
63. What country of Asia is about equal in size to Texas?
64. In what respects are Australia and California alike?
65. Mention three animals that are found only in Africa.
66. Name the most important country in each of the six Grand Divisions.
67. Which state of the United States is nearest in size to England?
68. Name the largest city in the smallest state of the United States.
69. What is the largest city in longitude west from Washington?
70. Two points on the Arctic Circle have the same difference of longitude as two points on the Tropic of Capricorn; are the two former points, or the two latter, farther apart in miles—and why?

The Change of Day.—If a person should start from any point of the earth's surface and travel directly west, to keep his time in agreement with the local time he would have to turn the hands of his watch back four minutes for every degree of longitude he passed through. By the time he had gone once around the earth (360°), he would have turned his watch back 360 times four minutes, or twenty-four hours. He would thus apparently have lost one day; that is, if the day of his return to the starting-point should be Saturday, it would be Friday according to his reckoning. Each of his days would have been sufficiently longer than twenty-four hours to make up an aggregate of just one day.

Now the question is, where does the day change—that is, where is the day first recognized as one day in advance of the traveler's reckoning? Schedler, in his "Manual for the Use of Globes", distinguishes the line marked by this change as "the International Date Line". As he traces it, it runs from Behring Strait southwest, along the ocean-side of Japan and between the Philippine Islands and Asia; there it curves, and then takes a southeasterly course to Chatham Island, passing on the Pacific side of Borneo, New Guinea, New Ireland, and the New Hebrides, and east of New Zealand. Trace its course on the Commercial Map of the World, p. 116. Navigators usually rectify the date on crossing the 180th meridian from Greenwich, counting a day twice if the voyage is toward the west, and dropping a day if sailing eastward.

GENERAL EXERCISE.

I. Name the oceans in the order of their size. Bound each, and name its chief arms; state the area of each, including its chief arms.

1. Pacific: area, 70,000,000 sq. mi.
2. Atlantic: area, 35,000,000 sq. mi.
3. Indian: area, 25,000,000 sq. mi.
4. Arctic: area, 4,000,000 sq. mi.
5. Antarctic: area, 6,500,000 sq. mi. (Little known; area conjectured.)

II. Name the largest lake in each Grand Division; describe its situation.

1. N. America: Superior, 32,000 sq. mi.
2. S. Amer.: Maracaybo, 5,300 sq. mi.
3. Europe: Ladoga, 6,804 sq. mi.
   Caspian Sea: area, 156,800 sq. mi.
4. Asia: Baikal, 12,500 sq. mi.
5. Africa: Victoria, 28,000 sq. mi.
6. Oceania: Eyre, 4,000 sq. mi.
   Sea of Aral: area, 26,900 sq. mi.

III. Name the six largest islands in the world; describe the situation of each.

1. Australia: area, 2,972,350 sq. mi.
2. Greenland: area, 760,000 sq. mi.
3. Borneo: area, 286,000 sq. mi.
4. New Guinea: area, 250,000 sq. mi.
5. Madagascar: area, 230,000 sq. mi.
6. Sumatra: area, 170,000 sq. mi.

IV. Name some of the highest inhabited spots in the world.

The Plateau of Thibet, elevation 15,000 feet; Pasco, Peru, 13,673 ft.; Potosi, Bolivia, 13,350 ft.; La Paz, Bolivia, 12,226 ft.; Pass of St. Bernard (Alps), 8,150 ft.

V. Name the six most densely peopled countries.

1. Belgium, 482 inhabitants to a square mile.
2. Holland, 319.
3. Great Britain and Ireland, 290.
4. China, 261.
5. Italy, 249.
6. Japan, 229.

VI. Name the six Grand Divisions in the order of size; in the order of population.

VII. Name the six Grand Divisions in the order of their density of population.

1. Europe, 83 inhabitants to a square mile.
2. Asia, 49.
3. Africa, 18.
4. Oceania, 9.
5. North America, 8.
6. South America, 4.

VIII. What six countries maintain the largest standing armies?

1. Russia: 840,711 men.
2. Italy: 736,502 men.
3. France: 502,700 men.
4. The German Empire: 445,462 men.
5. Austro-Hungary: 289,190 men.
6. China: 270,000 men.

IX. What six countries have the most miles of railroad line?

1. The United States: 102,250 miles.
2. The German Empire: 22,045 mi.
3. Gt. Britain and Ireland: 17,945 mi.
4. France: 16,223 miles.
5. Russia: 15,375 mi.
6. Austro-Hungary: 11,645 mi.

X. Which are the six great powers of the world?

1. Great Britain.
2. The United States.
3. The German Empire.
4. Russia.
5. France.
6. Austro-Hungary.

XI. What five powers have the most extensive territory?

1. The Russian Empire. 2. The British Empire. 3. The Chinese Empire. 4. The United States. 5. Brazil.

XII. What five powers have the largest population?

1. The Chinese Empire. 2. The British Empire. 3. The Russian Empire. 4. The United States. 5. The German Empire.

STATISTICAL TABLES.

Comparative Time.

Time at	Noon at Boston.	Noon at New York.	Noon at Chicago.	Noon at N. Orleans.	Noon at Denver.	Noon at San Fr'co.
	h. m. s.	*h m. s.*	*h. m. s.*	*h. m. s.*	*h. m. s*	*h. m. s.*
Philadelphia....	11 43 34	11 55 20	12 49 50	12 59 40	1 59 18	3 8 57
Baltimore......	11 37 44	11 49 30	12 44 0	12 53 50	1 53 28	3 3 7
Richmond......	11 34 24	11 46 10	12 40 40	12 50 30	1 50 8	2 59 47
Charleston.....	11 24 26	11 36 12	12 30 42	12 40 32	1 40 10	2 49 49
Detroit........	11 12 22	11 24 8	12 18 38	12 28 28	1 28 6	2 37 45
Cincinnati......	11 6 30	11 18 16	12 12 46	12 22 36	1 22 14	2 31 53
St. Louis.......	10 43 13	10 54 59	11 49 29	11 59 19	12 58 57	2 8 36
Omaha........	10 20 30	10 32 16	11 26 46	11 36 36	12 36 14	1 45 53
London....P. M.	4 43 51	4 55 37	5 50 7	5 59 57	6 59 34	8 9 14
Paris......P. M.	4 53 35	5 5 21	5 59 51	6 9 41	7 9 19	8 18 58
Berlin.....P. M.	5 37 50	5 49 36	6 44 6	6 53 56	7 53 34	9 3 13

Principal Crops of the United States in 1880.

(*From the Report of the Commissioner of Agriculture.*)

Products.	Quantity produced.	Acres cultivated.	Value of the Crop.	Bu., etc., per Acre.	Average Price.	Value per Acre.
Corn.........	1,717,434,543 bu.	62,317,842	$679,714,499	27.6	$0 39.6	$10 91
Wheat.......	498,549,868 bu.	37,986,717	474,201,850	13.1	95.1	12 48
Rye	24,540,829 bu.	1,767,619	18,564,560	13.9	75.6	10 50
Oats.........	417,885,380 bu.	16,187,977	150,243,565	25.8	36.0	9 28
Barley.......	45,165,346 bu.	1,843,329	30,090,742	24.5	66.6	16 32
Buckwheat...	14,617,535 bu.	822,802	8,682,488	17.7	59.4	10 55
Potatoes.....	167,659,570 bu.	1,842,510	81,062,214	91.0	48.3	44 00
Cotton.......	2,854,471,000 lbs.	15,475,300	280,266,242	184.5	09.8	18 11
Tobacco......	446,296,889 lbs.	602,516	36,414,615	740.7	08.2	60 44
Hay	31,925,233 T.	25,863,955	371,811,084	1.23	11 65	14 38

In 1880, the six leading states in the production of corn were Iowa, Illinois, Missouri, Ohio, Kansas, and Indiana; in the production of wheat, Illinois, Ohio, Indiana, Minnesota, California, and Iowa. The wheat-crop for 1881 is estimated at 380,000,000 bushels.

Imports and Exports of the Leading Commercial Countries,

FOR 1881, OR THE LATEST YEAR REPORTED:

AND A SUMMARY OF THEIR TRADE WITH THE UNITED STATES IN 1881.

Countries.	Total Imports.	Imports from the United States.	Total Exports.	Exports to the United States.	Total Imports and Exports.
Great Britain	$2,056,147,825	$491,260,473	$1,432,072,330	$217,835,629	$3,488,220.155
Ger. Empire.	973,200,000	70,664,438	705,375,000	84,491,524	1,678,575,000
United States	753,240,125	....	921,784.193	....	1,675,024,318
France......	981,509,400	94,273,751	680,129,800	88,027,200	1,661,639,200
Belgium	452,265,000	36,326,331	428,149,065	12,634,315	880,414,065
Russia......	395,466,667	16,025,884	418,466,667	2,887,153	813,933,334
Austro-Hun	302,900,000	2,255,412	329,995,000	1,415,611	632,895,000
Holland.....	338,680,000	26.352,507	232,680,000	5,898,806	571,360,000
Italy........	244,548,042	9,018,875	225.128,904	11,644,157	469,676,946
Australia ...	236,893,913	....	206,149,785	....	443,043,698
China.......	105,000,000	5,480,080	110,000.000	22,358,908	205,000,000
Brazil.......	81,752,900	9,252,415	102,029,250	52,783,408	183,782,150
Canada	86,489,747	40,347,433	87,911,458	40,557,749	174,401,205
Sweden.....	62,139,340	('79) 1,655,936	50,264,280	('79) 300,428	112.403,620

REFERENCE-TABLES,

FOR FINDING CITIES AND TOWNS ON THE SECTIONAL MAPS OF THE UNITED STATES AND EUROPE, WITH THE PRONUNCIATION IN THE CASE OF DIFFICULT NAMES.

To find a required place on the map, note the letters given with it in the Table below, relating to that map. Then, turning to the map, find where a vertical and a horizontal line drawn from the same letters on the margin would meet, and the place in question will be found at or near their junction.

Wherever there is a liability to mistake, accented syllables are marked, and the pronunciation is given. Sound *ă* like *a* in *bat; ą* obscure like *a* in *woman; ĕ* like *e* in *get; ę* obscure like *e* in *summer; ī* like *i* in *ice; ĭ* like *i* in *pin; ō* like *o* in *no; ŏ* like *o* in *not; ǫ* obscure like *o* in *terror; ö* and ü like *eu* in French, nearly like *e* in *her* prolonged ; *o͞o* like *oo* in *wool; ou* as in *out; ŭ* like *u* in *up; ü* with its sound in German ; *ḡ* like *g* in *get;* K with the guttural sound of *ch* in German ; N with the nasal sound of final *n* in French, almost like *ng; th* as in *moth.*

The places named below in connection with each Sectional Map of the United States may be made the subject of special map-exercises for pupils residing in the section.

Sectional Map U. S. No. 1.

New England States and Long Island.

PAGE 39.

Ab'ington, Mass......Hu
Alfred, Me......Hp
Amesbury, Mass......Hr
(*aymz'ber-e*)
Amherst (*am'erst*), Mass..Dt
Amherst (*am'erst*), Me...Nj
An'dover, Mass......Gs
An'dover, Me......Hk
Anso'nia, Conn......Bx
Arlington, Mass......Mv
Arlington, Vt......Bq
A'thol, Mass......Ds
Atlantic Station, Mass....Pz
Attleboro, Mass......Gv
Augusta, Me......Jl
Auburn, Me......Im
Ayer Junction, Mass......Fs
Bab'ylon, N. Y......Bz
Bangor (*bang'gor*), Me...Mj
Barn'stable, Mass......Iw
Barton, Vt......Ek
Bath, Me......Kn
Bel'fast, Me......Ll
Bellows Falls, Vt......Dq
Bel'mont, Mass......Mw
Bennington, Vt......Br
Ber'lin Falls, N. H......Gl
Beth'el, Conn...... Ax
Beth'el, Me......Hm
Beverly, Mass......Hs
Biddeford, Me......Ip
Birmingham, Conn......Bx
Blackstone, Mass......Fu
Blanchard, Me......Ki
Boothbay, Me......Kn
Boston, Mass......Gt, Ox
Boylston, Mass......Ny
Bradford, N. H......Ep
Bradford, Vt......En
Brandon, Vt......Cu
Brattleboro, Vt......Dr
Brewer, Me......Mj
Bridgeport, Conn......By
Bridgeton, Me......Hn
Bridge'water, Me......Od
Brighton, Mass......Mx
Bristol, N. H......Fo
Bristol, Me......Kn
Bristol, R. I......Gw
Brookline, Mass......Ny
Brooklyn, N. Y......Az
Brunswick, Me......Jn
Bucksport, Me......Mk
Burlington, Vt......Bl
Burn'ham, Me......Kk
Calais (*kal'is*), Me......Pi
Cambridge, Mass....Gt, Nx
(*kame'-*)
Camden, Me......Lm
Can'ton, Me......Il
Caribou (*kăr'e-boo*), Me..Nb
Castine (*kas-teen'*), Me...Ml
Castleton, Vt......Bo
(*kas'sęl-tǫn*)
Charlestown, N. H......Dg
Chelsea (*chel'se*), Mass...Pw
Cherryfield, Me......Ok
Chic'opee, Mass......Du
Clare'mont, N. H......Dp
Cliftondale, Mass......Pu
Clinton, Mass......Ft
Colebrook, N. H......Fj
Columbia, Me......Ok
Columbia, N. H......Fj
Concord, Mass......Gt
(*kong'kǫrd*)
Concord, N. H......Fq
(*kong'kǫrd*)
Corinna, Me......Lj
Damariscot'ta, Me......Kn
Danbury, Conn......Ax
Danforth, Me......Og
Danielsonville, Conn....Ev
Danville, Vt......El
Dedham (*ded'ąm*), Mass...Mz
Derby Line, Vt......Ej
Dexter, Me......Lj
Dor'chester, Mass......Oz
Dover, Me......Li
Dover, N. H......Hq
E. Ca'naan, N. H......Eo
E. Green'wich, R. I......Fw
Eastport, Me......Qj
Edgartown, Mass......Ix
Ellsworth, Me......Nk
Everett, Mass......Ow
Exeter, N. H......Hr
Fairfield, Conn......By
Fairfield, Me......Kk
Fall River, Mass......Gw
Falmouth, Mass......Iw
(*fal'muth*)
Farmington, Me......Ik
Farmington, N. H......Gp
Fitchburg, Mass......Fs
Flushing, N. Y......Az
Forest Hill, Mass......Nz
Fort Fairfield, Me......Oc
Fort Kent, Me......Ma
Foxcroft, Me......Li
Fra'mingham, Mass......Ft
Franco'nia, N. H......Fm
Franklin, N. H......Fp
Freeport, Me......Jn
Fryeburg (*fri'-*), Me....Gn
Gardiner, Me......Jm
Glen Cove, N. Y......Az
Gloucester, Mass......Hs
(*glos'tęr*)
Gorham (*go'rąm*), Me.....Io
Gorham (*go'rąm*), N. H..Gl
Great Barrington, Mass..Bu
Great Falls, N. H......Hq
Greenfield, Mass......Ds
Greenport, N. Y......Dy
Greenville, Me......Kh
Groton (*graw'tǫn*), Conn Ex
Guildhall, Vt......Fk
Guilford, Me......Ki
Hallowell, Me......Jl
Hanover, Me......Hl
Hanover, N. H......Eo
Hartford, Conn......Cv
Hartford, Vt......Do
Haverhill, Mass......Gr
(*hay'vęr-il*)
Haverhill, N. H......Em
(*hay'vęr-il*)
Haynesville, Me......Og
Highgate, Vt......Cj
Hillsboro Bridge, N. H...Eq
Hingham, Mass......Hu
(*hing'ąm*)
Hinsdale, N. H......Dr
Hiram, Me......Hn
Holyoke, Mass......Cu
(*hole'yoke*)
Houlton (*hole'tǫn*), Me...Oe
Hull, Mass......Qy
Hyde Park, Mass...... Nz
Hyde Park, Vt......Dk
Jamaica, N. Y......Az
Jamaica Plain, Mass......Ny
Keene, N. H......Dr
Kennebunk', Me......Ip
Kennebunkport', Me.....Ip
Kingston, R. I......Fx
Kittery, Me......Hq
Laco'nia, N. H......Fp
Lancaster, N. H......Fl
Lawrence, Mass......Gs
Lebanon, N. H......Eo
Len'ox, Mass......Bt
Lewiston, Me......Im
Lexington, Mass......Lv
Lincoln, Me......Mh
Lincolnville, Me......Lm
Linden, Mass......Pv
Lin'neus, Me......Nf
Lisbon, Me......Jn
Litchfield, Conn......Bv
Littleton, N. H......Fm
Londonder'ry, Vt......Cq
Long Island City, N. Y..Az
Lowell (*lo'ęl*), Mass......Gs
Lu'bec, Me......Qj
Lynn, Mass......Ht, Qu
Machias (*match-i'ąs*), Me.Pk
Machiasport, Me......Pk
(*match-i'ąs-port*)
Madawas'ka, Me......Na
Malden, Mass......Ov
(*mawl'dęn*)
Manchester, N. H......Fr
Manchester, Vt......Bq
Maplewood, Mass......Ov
Marblehead, Mass......Ht
Marlboro, Mass......Ft
Mattapan', Mass......Nz
Mattawam'keag, Me.....Nh
Mechanics Falls, Me.....Im
Medford, Mass......Nv
Melrose', Mass......Ou
Meriden, Conn......Cw
Middlebury, Vt......Bm
Middletown, Conn......Cw
Milford, Mass......Fu
Milford, N. H......Fr
Milltown, Me......Pi
Mi'lo, Me......Li
Milton, Mass......Oz
Montpelier, Vt......Dm
(*mont-peel'yęr*)
N. Adams, Mass......Bs
N. Anson, Me......Jj
N. Conway, N. H......Gn
N. Vassalboro, Me......Kl
N. Weare (*wayr*), N. H..Fq
Nahant', Mass......Qv
Nantuck'et, Mass......Jx
Narragansett Pier, R. I...Fx
Nashua, N. H......Fr
Na'tick, Mass......Gt
Need'ham, Mass......Lz
Nepon'set, Mass......Oz
New Bedford, Mass.....Hw
New Britain, Conn.....Cw
Newbury, Vt......Dm
Newburyport', Mass.....Hr
New Haven, Conn......Cx
New London, Conn.....Ex
New Milford, Conn.....Aw
Newport, Me......Lj
Newport, N. H......Ep
Newport, R. I......Gx
Newport, Vt......Ej
Newton, Mass......Mx
Nor'ridgewock, Me......Jk
Northampton, Mass......Ct
Northfield, Vt......Cm
Norwalk, Conn......Ay
(*nor'wok*)
Norway, Me......Hm
Nor'wich, Conn......Ew
Oldtown, Me......Mj
Orford, N. H......En
O'rono, Me......Mj
Palmer (*pah'męr*), Mass.Du
Paris (*păr'is*), Me......Im
Passadum'keag, Me.... Mi
Patchogue (*-awg'*), N. Y. Bz
Patten, Me......Mf
Pawtuck'et, R. I......Gv
Peabody, Mass ......Hs
Pembroke, Me......Qj
Peterboro, N. H......Er
Pittsfield, Mass......Bt
Pittsfield, Me......Kk
Pittsfield, N. H......Gp
Pittsford, Vt......Co
Plymouth, Mass......Hv
(*plim'uth*)
Plymouth, N. H......Fo
(*plim'uth*)
Port Jefferson, N. Y.....Bz
Portland, Me......Io
Portsmouth, N. H......Hq
(*ports'muth*)
Poultney (*pōlt'ne*), Vt...Bo
Presque Isle, Me......Nc
(*presk-eel'*)
Princeton, Me......Pi
Providence, R. I......Fv
Putnam, Conn......Ev
Quincy, Mass......Pz
Randolph, Mass......Gu
Revere', Mass......Pw
Riverhead, N. Y......Cz
Rochester, N. H......Hp
Rockland, Me......Lm
Rockville, Conn......Dv
Roxbury, Mass......Ny
Rutland, Vt......Co
S. Ber'wick, Me......Hq
St. Albans (*awl'bąnz*), Vt. Cj
St. Johnsbury, Vt......El
Saccarappa, Me......Io
Saco (*saw'ko*), Me ......Ip
Sag Harbor, N. Y......Dy
Salem, Mass......Hs
Salmon Falls, N. H......Hq
(*sam'ǫn*)
Saugus, Mass......Pu
Searsport, Me......Ll
Sheffield, Mass......Bu
Skowhe'gan, Me......Kk
Somerville, Mass......Hw
(*sum'ęr-vil*)
Southampton, N. Y......Dz
Southbridge, Mass......Eu
Southport, Conn......By
Springfield, Mass......Du
Springfield, Vt......Dp
Springvale, Me......Hp
Stafford Springs, Conn..Dv
Stamford, Conn......Ay
Stockbridge, Mass......Bt
Sto'nington, Conn......Ex
Swamp'scott, Mass......Qu
Swanton, Vt......Cj
Taunton, Mass......Gv
(*tahn'tǫn*)
Thomaston, Me......Lm
Thompsonville, Conn....Du
Tilton, N. H......Fp
Van Buren, Me......Oa
Vanceborough, Me......Pg
Vergennes, Vt......Bm
(*ver-jenz'*)
W. Randolph, Vt......Dn
W. Roxbury, Mass......Mz
Waldoboro, Me......Km
(*wawl-do-bur'rŭh*)
Wallingford, Vt......Cp
Walpole (*wol'-*), N. H...Dq
Waltham, Mass......Lx
(*wol'thąm*)
Warren, R. I......Gw
Warwick, R. I......Fw
(*wor'rik*)
Waterbury, Conn......Bw
Waterbury, Vt......Cl
Watertown, Mass......Mx
Waterville, Me......Kk
Westerly, R. I......Fx
Westfield, Mass......Cu
Weymouth, Mass......Hu
(*way'muth*)
Whitneyville, Me......Pj
Williamstown, Mass.....Bs
Williman'tic, Conn.....Dw
Winch'endon, Mass......Es
Winchester, Mass......Nu
Winchester, N. H......Dr
Windsor, Vt......Dp
Winooski Falls, Vt......Bk
(*wĭ-noos'ke*)
Winsted, Conn......Bv
Winthrop, Mass......Pw
Wiscas'set, Me......Kn
Woburn, Mass......Gt
(*woo'burn*)
Wolcottville, Conn......Bv
Wolfborough, N. H.....Go
Wollaston, Mass......Pz
(*wo͝ol'ąs-tǫn*)
Woodstock, Vt......Do
Woonsock'et, R. I......Fv
Worcester, Mass......Et
(*wo͝os'tęr*)
York, Me......Hq

* * *

Sectional Map U. S. No. 2.

Middle Atlantic States.

PAGE 43.

Ab'ingdon, Va......Ay
Accomack' C. H., Va...Mw
Addison, N. Y......Jj
Albany, N. Y......Ph
(*awl'bą-ne*)
Albion, N. Y......Ig
Alexandria, Va......Ks
Alleghen'y, Pa......Eo
Allentown, Pa......Mn
Altoona, Pa......Hn
Amelia C. H., Va......Ix
Amsterdam, N. Y......Og
Annap'olis, Md......Ls
Annville, Pa......Ko
Antrim, Pa......Jk
Antwerp, N. Y......Md
Aqui'a Cr., Va......Ju
Ashland, Pa......Ln
Ath'ens, Pa......Kj
Atlantic City, N. J......Pr
Attica, N. Y......Hh
Auburn, N. Y......Lh
Av'on, N. Y......Ih
Bab'ylon, N. Y......Qn
Ballston, N. Y......Pg
Baltimore, Md......Kr
Barboursville, W. Va....Au
Barnegat', N. J......Pq
Bata'via, N. Y......Hg
Bath, N. Y......Ji
Beaver, Pa......En
Beaver Falls, Pa......En
Bedford, Pa......Hp
Bellefonte, Pa......Im
(*bel-font'*)
Beth'lehem, Pa......Nn
Beverly, W. Va......Et
Bing'hamton, N. Y......Mj
Birmingham, Pa......Eo
Bloomsburg, Pa......Lm
Blossburg, Pa......Jk
Bolton (*bole'tǫn*), N. Y....Pe
Boonville, N. Y......Nf
Bordentown, N. J......Op
Boydton, Va......Hz
Bradford, Pa......Hj
Braxton C. H., W. Va....Dt
Bricksburg, N. J......Pp
Bridgeton, N. J......Nr
Bristol, Pa......Op
Bristol, Va., Tenn......Az
Brockport, N. Y......Ig
Brooklyn, N. Y......Pn
Brookville, Pa......Gm
Brownsville, Pa......Ep
Buckhan'non, W. Va....Es
Buffalo, N. Y......Gh
Burkeville, Va......Hx
Burlington, N. J......Op
Butler, Pa......Em
Cambridge (*kame'-*), Md.Mt
Camden, N. J......Np
Canandaigua, N. Y......Jg
(*kan-ąn-day'gwą*)
Can'ton, N. Y......Ne
Cape May, N. J......Os
Cape Vincent, N. Y.....Ld
Car'bondale, Pa......Mk
Carlisle (*kar-lile'*), Pa....Jp
Carthage, N. Y......Md
Catskill, N. Y......Pj
Cazeno'via, N. Y......Mh
Centreville, Md......Ms
Chambersburg, Pa......Jp
Chancellorsville, Va.....Ju
Charleston, W. Va......Bu
Charlestown, W. Va......Ir
Charlottesville, Va......Hv
Chatham (*chat'ąm*), Va...Fy
Chester, Pa......Np
Chestertown, Md......Mr
Christiansburg, Va......Dx
Clarion (*klăr'-*), Pa......Fm
Clarksburg, W. Va......Dr
Clarksville, Va......Hz
Clayton, N. Y......Ld
Clearfield, Pa......Hm
Clinton, N. Y......Ng
Clyde, N. Y......Kg
Cohoes', N. Y......Ph
Columbia, Pa......Lp
Conneaut'ville, Pa......Ek
Cooperstown, N. Y......Nh
Corning, N. Y......Kj
Corry, Pa......Fj
Cortland Village, N. Y..Lh
Coudersport (*kou'-*), Pa...Ik
Covington, Va......Ev
(*kuv'ing-tǫn*)
Coxsackie, N. Y......Pi
(*ko͝ok-sock'e*)
Crisfield, Md......Mv
Cuba, N. Y......Hj
Cul'peper, Va......It
Cumberland, Md......Gq
Dansville, N. Y......Ii
Danville, Pa......Km
Danville, Va......Fz
Delaware City, Del......Mq
Del'hi, N. Y......Ni
Delmar', Del......Nt
Deposit, N. Y......Mj
Doylestown, Pa......No
Dover, Del......Nr
Dun'kirk, N. Y......Fi
Easton, Md......Ms
Easton, Pa......Nn
Eastville, Va......Mx
E'bensburg, Pa......Gn
Egg Harbor City, N. J. .Oq
Elizabeth, N. J......Pn
Elizabethtown, N. Y....Qd
Elkton, Md......Mq

Ellenville, N. Y.	Ok
Ellicott City, Md	Kr
Ellicottville, N. Y.	Hi
Elmi'ra, N. Y.	Kj
Emmittsburg, Md.	Jq
Emporium, Pa.	Hl
Erie, Pa.	Ej
Es'tillville, Va.	Az, Bn
Fairfax C. H., Va.	Js
Fair'mont, W. Va.	Eq
Farmville, Va.	Hx
Fay'etteville, W. Va.	Cv
Fishkill, N. Y.	Pk
Fort Covington, N. Y. *(kuv'ing-tǫn)*	Oa
Fort Edward, N. Y.	Qf
Franklin, Pa.	El
Frederick, Md.	Jr
Fredericksburg, Va.	Ju
Fredo'nia, N. Y.	Fi
Freehold, N. J.	Po
Front Royal, Va.	Is
Frostburg, Md.	Gq
Fulton *(full'tǫn)*, N. Y.	Lf
Genese'o, N. Y.	Ih
Gene'va, N. Y.	Kh
Georgetown, D. C.	Ks
Georgetown, Del.	Nt
Gettysburg *(ḡet'-)*, Pa.	Jq
Girard *(je-rard')*, Pa.	Ej
Glen's Falls, N. Y.	Qf
Glenville, W. Va.	Cs
Gloucester C., N. J. *(glos'tȩr)*	Np
Gloversville, N. Y. *(gluv'ȩrz-vil)*	Og
Gordonsville, Va.	Hv
Go'shen, N. Y.	Pl
Gouverneur, N. Y. *(goov-ȩr-noor')*	Mc
Gowan'da, N. Y.	Gi
Grafton, W. Va.	Er
Great Bend, Pa.	Mj
Green'castle, Pa.	Iq
Greensburg, Pa.	Fo
Greenville, Pa.	Dl
Grundy, Va.	Aw
Guyandotte, W. Va. *(ḡi-ą-dot')*	At
Hackensack, N. J.	Pm
Ha'gerstown, Md.	Iq
Halifax C. H., Va.	Gz
Hamburg, N. Y.	Gh
Hamilton, N. Y.	Mh
Hampton, Va.	Ly
Hancock, Md.	Iq
Hanover, Pa.	Kp
Hanover C. H., Va.	Jv
Harper's Ferry, W. Va.	Ir
Harrisburg, Pa.	Ko
Harrisonburg, Va.	Gt
Hartford City, W. Va.	As
Havan'a, N. Y.	Ki
Hav'erstraw, N. Y.	Pl
Havre de Grace, Md. *(hav'ȩr de grass)*	Lq
Ha'zleton, Pa.	Mm
Hicksford, Va.	Jz
Hillsville, Va.	Cz
Ho'boken, N. J.	Pn
Hollidaysburg, Pa.	Ho
Ho'mer, N. Y.	Lh
Honesdale, Pa.	Nk
Hornellsville, N. Y.	Ii
Hudson, N. Y.	Pi
Huntersville, W. Va.	Eu
Huntington, W. Va.	At
Il'ion, N. Y.	Ng
Indian'a, Pa.	Gn
Ith'aca, N. Y.	Li
Jackson C. H., W. Va.	Bs
Jamestown, N. Y.	Gj
Jersey City, N. J.	Pn
Jerusalem, Va.	Kz
Johnstown, N. Y.	Og
Johnstown, Pa.	Go
Jonesville, Va.	An
Keeseville, N. Y.	Qc
Kinderhook', N. Y.	Qi
Kingston, N. Y.	Pj
Kingwood, W. Va.	Fq
Kittan'ning, Pa.	Fn
Kutztown, Pa.	Mn
Lake George, N. Y.	Pf
Lambertville, N. J.	Oo
Lancaster, Pa.	Lp
Lansingburg, N. Y.	Qh
Laurel, Del.	Nt
Lebanon, Pa.	Lo
Leesburg, Va.	Js
Leonardtown, Md.	Lu
Le Roy, N. Y.	Ig
Lewes *(lew'ȩss)*, Del.	Ns
Lewisburg, Pa.	Km
Lewisburg, W. Va.	Dv
Lewiston, N. Y.	Gg
Lewistown, Pa.	Jn
Lexington, Va.	Fv
Liberty, Va.	Fx
Little Falls, N. Y.	Ng
Lock Haven, Pa.	Jm
Lockport, N. Y.	Hg
Lo'gan C. H., W. Va.	Av
Long Branch, N. J.	Po
Long Island City, N. Y.	Pn
Louisa C. H., Va.	Iv
Lowville *(lou'vil)*, N. Y.	Mc
Lynchburg, Va.	Gx
Lyons, N. Y.	Kg
Mahanoy City, Pa. *(may-hą-noy')*	Ln
Malone', N. Y.	Ob
Manas'sas, Va.	Jt
Manchester, Va.	Jw
Marathon *(măr'-)*, N. Y.	Li
Marietta, Pa.	Kp
Marion *(măr'e-ǫn)*, Va.	By
Martinsburg, W. Va.	Iq
Masse'na, N. Y.	Nb
Mauch Chunk, Pa. *(mawk)*	Mm
Mayville, N. Y.	Fi
McKeesport, Pa.	Eo
Meadville, Pa.	Ek
Mechanicsburg, Pa.	Kp
Medi'na, N. Y.	Hg
Mercer, Pa.	El
Middletown, N. Y.	Ol
Middletown, Pa.	Kp
Mifflintown, Pa.	Jn
Milford, Del.	Ns
Milford, Pa.	Ol
Millville, N. J.	Or
Milton, Pa.	Km
Mi'nersville, Pa.	Ln
Monongahe'la City, Pa.	Eo
Monticello, N. Y.	Ok
Montrose, Pa. *(mǫn-troze')*	Mk
Moorefield, W. Va.	Gs
Mora'via, N. Y.	Lh
Morgantown, W. Va.	Eq
Morristown, N. J.	On
Moundsville, W. Va.	Dp
Mount Holly, N. J.	Op
Mount Morris, N. Y.	Ih
Muncy, Pa.	Kl
Myerstown, Pa.	Lo
Newark, N. J.	Pn
Newark, N. Y.	Jg
New Brighton, Pa.	En
New Brunswick, N. J.	Oo
Newburg, N. Y.	Pk
New Castle, Del. *(nu'kas-sȩl)*	Nq
New Castle, Pa. *(nu'kas-sȩl)*	Em
New Market, Va.	Ht
New Martinsville, W. Va.	Cq
Newton, N. J.	Om
New York, N. Y.	Pn
Niag'ara Falls, N. Y.	Gg
Norfolk *(nor'fǫk)*, Va.	Ly
Norristown, Pa.	Np
Northville, N. Y.	Pf
Nor'wich, N. Y.	Mi
Nunda, N. Y.	Ih
Ny'ack, N. Y.	Pm
Oakland, Md.	Fr
Ogdensburg, N. Y.	Mb
Oil City, Pa.	Fl
Olean *(o-le-an')*, N. Y.	Hj
Oneida *(o-ni'dą)*, N. Y.	Mg
Oneonta, N. Y.	Ni
Orange C. H., Va.	Iu
Oswe'go, N. Y.	Kf
Owe'go, N. Y.	Lj
Oxford, Md.	Lt
Oxford, N. Y.	Mi
Palmy'ra, N. Y.	Jg
Pamplin's, Va.	Hx
Parkersburg, W. Va.	Br
Pat'erson, N. J.	Pm
Pear'isburg, Va.	Cw
Peekskill, N. Y.	Pl
Penn Yan, N. Y.	Jh
Petersburg, Va.	Jx
Philadelphia, Pa.	Np
Philip'pi, W. Va.	Er
Phœnixville, Pa.	Mp
Piedmont, W. Va. *(peed'mont)*	Gr
Pittsburgh, Pa.	Eo
Pittston, Pa.	Ml
Plainfield, N. J.	On
Plattsburg, N. Y.	Qb
Po'comoke City, Md.	Nv
Port Deposit, Md.	Lq
Port Jervis, N. Y.	Ol
Port Leyden, N. Y. *(li'dȩn)*	Nf
Portsmouth, Va. *(ports'muth)*	Ly
Port Tobacco, Md.	Kt
Potsdam, N. Y.	Nb
Pottstown, Pa.	Mo
Pottsville, Pa.	Mn
Poughkeepsie, N. Y. *(po-kip'se)*	Pk
Princess Anne, Md.	Mu
Princeton, N. J.	Oo
Princeton, W. Va.	Cw
Pulaski *(pu-las'ke)*, N. Y.	Lf
Reading *(red'ing)*, Pa.	Mo
Reno'vo, Pa.	Il
Rhinebeck, N. Y.	Pj
Richfield Springs, N. Y.	Nh
Richmond, Va.	Jw
Ridgway, Pa.	Gl
Rochester, N. Y.	Ig
Rockville, Md.	Js
Rocky Mount, Va.	Ey
Rome, N. Y.	Mg
Romney, W. Va.	Gr
Rouse's Point, N. Y.	Qa
Sackett's Harbor, N. Y.	Le
Salamanca, N. Y.	Gj
Salem, N. J.	Nq
Salem, N. Y.	Qg
Salem, Va.	Ex
Salisbury, Md. *(sawlz'ber-e)*	Mu
Sandy Hill, N. Y.	Qf
Sarato'ga Springs, N. Y.	Pg
Saugerties, N. Y. *(saw'ḡȩr-teez)*	Pj
Schenectady, N. Y. *(skȩ-nek'tą-de)*	Ph
Schoharie, N. Y. *(sko-hăr're)*	Oh
Schuylkill Haven, Pa. *(skool'kil)*	Ln
Scottsville, Va.	Hv
Scranton, Pa.	Ml
Seaford, Del.	Mt
Seneca Falls, N. Y.	Kg
Shamo'kin, Pa.	Kn
Sha'ron, Pa.	Dl
Sha'ron Springs, N. Y.	Oh
Shenando'ah, Pa.	Ln
Shepherdstown, W. Va.	Ir
Shippensburg, Pa.	Jp
Sing Sing, N. Y.	Pm
Smyrna, Del.	Mr
Snow Hill, Md.	Nu
So'dus, N. Y.	Kg
Somerset, Pa. *(sum'ȩr-set)*	Gp
Staunton, Va. *(stan'tǫn)*	Gu
St. Mary's, W. Va.	Cr
Stroudsburg, Pa. *(stroudz'burg)*	Nm
Suffolk *(suf'fǫk)*, Va.	Lz
Sunbury, Pa.	Kn
Susquehanna, Pa.	Mj
Syracuse, N. Y. *(sĭr'ą-kuse)*	Lg
Tamaqua, Pa. *(tą-maw'kwą)*	Mn
Tappahannock, Va.	Kv
Ticondero'ga, N. Y.	Qe
Tidioute *(tid-e-oot')*, Pa.	Fk
Tio'ga, Pa.	Jj
Ti'tusville, Pa.	Fk
Tonawanda, N. Y. *(tŏn-ą-wŏn'dą)*	Gg
Towanda, Pa. *(to-wŏn'dą)*	Kk
Trenton, N. J.	Oo
Trenton Falls, N. Y.	Nf
Troy, N. Y.	Qh
Tuckerton, N. J.	Pq
Tunkhannock, Pa.	Lk
Tyrone *(tı-rone')*, Pa.	Hn
Union, W. Va.	Dw
Union City, Pa.	Ek
Uniontown, Pa.	Fp
U'tica, N. Y.	Ng
Vineland, N. J.	Oq
Walton, N. Y.	Nj
Warm Springs, Va.	Fv
Warren, Pa.	Fk
Warrensburg, N. Y.	Pf
Warrenton, Va.	It
Warsaw, N. Y.	Ih
Washington, D. C.	Ks
Washington, Pa.	Eo
Waterford, N. Y.	Ph
Waterloo', N. Y.	Kg
Watertown, N. Y.	Md
Watkins, N. Y.	Ki
Waverly, N. Y.	Kj
Waynesborough, Va.	Gv
Waynesburg, Pa.	Ep
Wellsboro, Pa.	Jk
Wellsburg, W. Va.	Do
Wellsville, N. Y.	Ij
West Chester, Pa.	Mp
West'minster, Md.	Kq
Weston, W. Va.	Ds
West Point, N. Y.	Pl
West Troy, N. Y.	Ph
Wheeling, W. Va.	Dp
White'hall, N. Y.	Qe
White Sul. Spr., W. Va.	Dv
Wilkesbarre, Pa. *(wilks'băr-re)*	Ml
Williamsburg, Va.	Kx
Williamsport, Md.	Iq
Williamsport, Pa.	Kl
Wilmington, Del.	Mq
Winchester, Va.	Hr
Woodbury, N. J.	Nq
Woodstock, Va.	Hs
Wytheville *(with'-)*, Va.	Cy
Yonkers, N. Y.	Pm
York, Pa.	Kp
Yorktown, Va.	Lx

◆

Sectional Map U. S. No. 3.

Southern States (in part).

PAGE 48.

Ab'beville, S. C.	Lf
Ai'ken, S. C.	Mh
Albany *(awl'bą-ne)*, Ga.	Il
Allendale, S. C.	Mi
Amer'icus, Ga.	Ik
Anderson, S. C.	Ke
Andersonville, Ga.	Ij
Apop'ka, Fla.	Mr
Appalachico'la, Fla.	Hp
Asheville, N. C.	Kc
Ath'ens, Ala.	Ed
Ath'ens, Ga.	Jg
Ath'ens, Tenn.	Ic
Atlanta, Ga.	Ig
Auburn, Ala.	Gj
Augusta, Ga.	Mh
Bainbridge, Ga.	Hm
Bakersville, N. C.	Lb
Baldwin, Fla.	Lo
Barnesville, Ga.	Ii
Beaufort *(bo'fǫrt)*, N. C.	Td
Beaufort *(bu'fǫrt)*, S. C.	Nj
Bennettsville, S. C.	Pe
Birmingham, Ala.	Eg
Blakely, Ga.	Hl
Branchville, S. C.	Nh
Bristol, Tenn., Va.	La
Bronson, Fla.	Kp
Brooksville, Fla.	Ls
Brownsville, Tenn.	Bb
Brunswick, Ga.	Mm
Butler, Ga.	Ij
Calhoun, Ga.	He
Camden, Ala.	Dk
Camden, S. C.	Of
Camilla, Ga.	Im
Carrollton, Ala.	Ch
Carrollton, Ga.	Hg
Cartersville, Ga.	Hf
Carthage, N. C.	Pe
Carthage, Tenn.	Ga
Cave Spring, Ga.	Gf
Cedar Keys, Fla.	Kq
Cerro Gordo, Fla.	Fm
Chapel Hill, N. C.	Qb
Charleston, S. C.	Pi, Uj
Charlotte, N. C.	Nd
Chattahoochee, Fla.	Hn
Chattanooga, Tenn.	Hd
Cheraw', S. C.	Oe
Chester, S. C.	Ne
Claiborne, Ala.	Dl
Clarksville, Tenn.	Da
Clayton, Ala.	Gk
Clayton, Ga.	Jc
Cleveland, Tenn.	Hd
Cochran *(kok'rąn)*, Ga.	Jj
Columbia, Ala.	Gl
Columbia, S. C.	Nf
Columbia, Tenn.	Ec
Columbiana, Ala. *(ko-lum-be-an'ą)*	Eh
Columbus, Ga.	Hj
Conwayboro, S. C.	Qg
Covington, Ga. *(kuv'ing-tǫn)*	Jg
Covington, Tenn. *(kuv'ing-tǫn)*	Ab
Cow'pens, S. C.	Md
Cullman, Ala.	Ef
Cuthbert, Ga.	Hk
Dadeville, Ala.	Gi
Dahlon'ega, Ga.	Ie
Dalton *(dawl'tǫn)*, Ga.	He
Da'rien, Ga.	Ml
Darlington, S. C.	Pf
Dawson, Ga.	Ik
Deca'tur, Ala.	Ec
Demop'olis, Ala.	Cj
Dover, Tenn.	Da
Dresden *(drez'dȩn)*, Tenn.	Ca
Dupont', Ga.	Km
Durham *(dur'ąm)*, N. C.	Qb
Dyersburg, Tenn.	Aa
Eastman, Ga.	Kk
Eatonton, Ga.	Jh
E'denton, N. C.	Ta
Edgefield, S. C.	Mg
El'berton, Ga.	Kf
Elizabeth City, N. C.	Ua
Elizabethtown, N. C.	Re
Ellaville, Fla.	Jn
Enfield, N. C.	Sa
Enterprise, Fla.	Nr
Euchee Anna, Fla.	Fn
Eufaula, Ala.	Gk
Eutaw, Ala.	Ci
Evergreen, Ala.	El
Fayette' C. H., Ala.	Dg
Fay'etteville, N. C.	Qd
Fay'etteville, Tenn.	Fd
Fernandina, Fla. *(fer-nan-de'ną)*	Mn
Florence, Ala.	Dd
Forsyth *(for-sīth')*, Ga.	Ii
Fort Gaines, Ga.	Hl
Fort Valley, Ga.	Jj
Franklin, N. C.	Jd
Franklin, Tenn.	Eb
Gadsden, Ala.	Ff
Gainesboro, Tenn.	Ga
Gainesville, Ala.	Ci
Gainesville, Fla.	Lp
Gainesville, Ga.	Jf
Gal'latin, Tenn.	Fa
Georgetown, S. C.	Ph
Goldsboro, N. C.	Re
Gran'iteville, S. C.	Mg
Greensboro, Ala.	Di
Greensboro, Ga.	Kh
Greensboro, N. C.	Pb
Greenville, Ala.	Ek
Greenville, N. C.	Sc
Greenville, S. C.	Le
Greenville, Tenn.	Kb
Griffin, Ga.	Ih
Grove Hill, Ala.	Ck
Guntersville, Ala.	Ff
Hamburg, S. C.	Mh
Harrison, Tenn.	Hd
Hartsville, Tenn.	Fa
Hayneville, Ala.	Ej
Henderson, Tenn.	Bc
Hertford, N. C.	Ua
Hillsboro, N. C.	Qb
Humboldt, Tenn. *(hum'bōlt)*	Bb
Huntingdon, Tenn.	Cb
Huntsville, Ala.	Ee
Irwinville, Ga.	Jl
Jackson, Tenn.	Bb
Jacksonville, Ala.	Gg
Jacksonville, Fla.	Mn
Jasper, Ala.	Df
Jasper, Fla.	Kn
Jes'up, Ga.	Ml
Jonesboro, Ga.	Ih
Jonesboro, Tenn.	La
Ke'nansville, N. C.	Rd
Key West, Fla.	Tt
Kingston, Ga.	Hf
Kingston, Tenn.	Ib
Kingstree, S. C.	Pg
Kinston, N. C.	Sc
Knoxville, Tenn.	Ib
Lafayette, Ala. *(laf-ay-yet')*	Gi
La Grange, Ga. *(lah graynj)*	Hi
La Grange, Tenn. *(lah graynj)*	Bd
Lake City, Fla.	Ko
Lancaster, S. C.	Ne
Laurensville, S. C.	Le
Lawrenceville, Ga.	Ig
Lebanon, Tenn.	Fb
Leesburg, Fla.	Mr
Legare'ville, S. C.	Tk
Lenoir *(le-nore')*, N. C.	Mb
Lincolnton, N. C.	Mc
Linden, Ala.	Dj
Live Oak, Fla.	Ko
Livingston, Ala.	Ci
Loudon *(lou'dǫn)*, Tenn.	Ic
Lumberton, N. C.	Qe
Lumpkin, Ga.	Hk
Ma'con, Ga.	Ji
Madison, Fla.	Jn
Madison, Ga.	Jh
Magnolia, Fla.	Mo
Manatee', Fla.	Rn
Marianna, Fla.	Gn
Marietta, Ga.	Hg
Marion *(măr'e-ǫn)*, Ala.	Di
Marion *(măr'e-ǫn)*, S. C.	Pf
McMinnville, Tenn.	Gc
Mellonville, Fla.	Nr
Memphis, Tenn.	Ac
Middleburgh, Fla.	Mo
Mi'lan, Tenn.	Bb
Milledgeville, Ga.	Ji
Millen, Ga.	Mi
Milton, Fla.	En
Montezu'ma, Ga.	Ij
Montgomery, Ala. *(mǫnt-gum'ȩr-e)*	Fj
Monticello, Fla.	Jn
Morehead City, N. C.	Td
Morganton, N. C.	Mc
Morristown, Tenn.	Jb
Moulton *(mole'tǫn)*, Ala.	Dc
Moultrieville, S. C. *(mole'tre-vil)*	Vj
Mount Airy, N. C.	Na
Mount Pleasant, S. C.	Vi
Murfreesboro, N. C.	Ta
Murfreesboro, Tenn.	Fb
Nashville, Tenn.	Eb
New Berne, N. C.	Td
Newberry, S. C.	Mf
New'nan, Ga.	Hh
New'nansville, Fla.	Lp
Newport, N. C.	Td
New Smyrna, Fla.	Nq
Ninety-Six, S. C.	Lf
Ocala *(o-kah'lah)*, Fla.	Lq
Olus'tee, Fla.	Lo
Opeli'ka, Ala.	Gj
Orangeburg, S. C.	Nh
Orlando, Fla.	Ms
Oxford, Ala.	Fg
Ozark', Ala.	Gl
Palat'ka, Fla.	Mp
Paris *(păr'is)*, Tenn.	Ca
Pendleton, S. C.	Ke
Pensaco'la, Fla.	Dn
Perry, Ga.	Jj
Pickensville, Ala.	Ch
Plymouth, N. C. *(plim'uth)*	Tb
Pol'lard, Ala.	Dm
Prattville, Ala.	Ej
Pulaski, Tenn. *(pu-las'ke)*	Ed
Pun'ta Ras'sa, Fla.	Sp
Quincy, Fla.	Hn
Quitman, Ga.	Jn
Raleigh *(raw'le)*, N. C.	Qb
Reidsville, Ga.	Mk
Reidsville, N. C.	Pa
Ringgold, Ga.	Hd
Rives *(reevz)*, Tenn.	Ba
Rome, Ga.	Hf
Salem, N. C.	Ob
Salisbury, N. C. *(sawlz'ber-e)*	Oc
Sandersville, Ga.	Ki
Sanford, Fla.	Mr
Savannah, Ga.	Nk
Savannah, Tenn.	Cd
Scottsboro, Ala.	Fe
Seale, Ala.	Hj
Selma, Ala.	Ej
Sewanee, Tenn. *(se-wah'ne)*	Gd
Shelby, N. C.	Md
Shelbyville, Tenn.	Fe
Smithville, N. C.	Rf
Somerville, Tenn. *(sum'ȩr-vil)*	Ac
Sparta, Ga.	Kh
Spartanburg, S. C.	Ld
Springfield, Tenn.	Ea
Starke, Fla.	Lp
States'ville, N. C.	Nc
St. Augustine, Fla. *(aw'gus-teen)*	No
St. Lucie *(loo-see')*, Fla.	Un
St. Mark's, Fla.	Io
Summerville, S. C.	Oi
Sumter, S. C.	Og
Sweet'water, Tenn.	Ie
Talbotton, Ga. *(tawl'bǫt-tǫn)*	Hi
Tallade'ga, Ala.	Fh
Tallahassee, Fla.	In
Tampa, Fla.	Lt, Rm
Tarboro, N. C.	Sb
Thomaston, Ga.	Ii
Thomasville, Ga.	In
Tocco'a, Ga.	Je
Trenton, Tenn.	Bb
Troy, Ala.	Fk
Tullaho'ma, Tenn.	Fc
Tuscaloosa, Ala.	Dh
Tuscumbia, Ala.	Dc
Tuske'gee, Ala.	Gj
Union, S. C.	Mc
Union City, Tenn.	Ba
Union Springs, Ala.	Gk
Uniontown, Ala.	Dj
Valdosta, Ga.	Km
Volusia, Fla.	Mq

Wadesboro, N. C........Od
Walhalla, S. C..........Ke
(*wol-hal'la*)
Walterboro, S. C........Ni
Warreuton, Ga..........Lh
Warrenton, N. C........Ra
Warrington, Fla.........Dn
Washington, N. C.......Tc
Waycross, Ga...........Lm
Waynesboro, Ga.........Li
Weldon, N. C...........Sa
West Point, Ga..........Hi
Wetump'ka, Ala.........Fj
Williamstou, N. C.......Tb
Wilmington, N. C.......Sf
Wilson, N. C...........Rb
Winehester, Tenn.......Fd
Winnsboro, S. C.........Nf
Winston, N. C..........Ob
Yanceyville, N. C........Pa
Yemassee', S. C.........Ni
Yorkville, S. C.........Nd

◆

Sectional Map U. S. No. 4.

Southern States (in part).

PAGE 50.

Aberdeen', Miss.........Uf
Alexandria, La..........Pk
Algiers (*al-jeerz'*), La....Us
Al'lain, La..............Rl
Amite (*am-eet'*) City, La..Sl
Arkadelphia, Ark.......Of
Arkan'sas City, Ark.....Rg
Arkan'sas Post, Ark......Rf
Armstrong Academy, Ind. Ter.................Kf
Ath'ens, Tex.............Lj
Ato'ka, Ind. Ter.........Le
Augusta, Ark...........Rd
Austin, Ark.............Qd
Austin, Miss.............Se
Austin, Tex.............Im
Bas'trop, Tex...........Jm
Batesville, Ark..........Qc
Bat'on Rouge (*roozh*), La.Rl
Bayou Sara, La..........Rl
(*bi'oo say'ra*)
Bay St. Louis, Miss.....Um
(*loo'e*)
Beaumont, Tex.........Nm
(*bo'mont*)
Bellefonte, Ark.........Ob
(*bel-font'*)
Belton, Tex..............Jl
Bentonville, Ark........Nb
Biloxi (*be-lox'e*), Miss.....Ul
Boggy Depot, Ind. Ter...Le
(*de'po*)
Bonham (*bon am*), Tex...Kg
Boonsboro, Ark.........Nc
Brandon, Miss...........Ti
Brazo'ria, Tex...........Lp
Bremond', Tex..........Kl
Brenham, Tex..........Km
(*bren'am*)
Brinkley, Ark...........Rd
Brookha'ven, Miss........Sj
Bryan, Tex..............Kl
Burkeville, Tex..........Ol
Caddo, Ind. Ter.........Kf
Calvert, Tex.............Kl
Camden, Ark............Pg
Cameron, Tex............Jl
Camp Lancaster, Tex....Dl
Camp Supply, Ind. Ter..Ga
Can'ton, Miss............Th
Carrollton, La...........Ss
Carrollton, Miss.........Tg
Chapel Hill, Tex........Km
Clarendon, Ark..........Re
Clarkesville, Tex........Mg
Clarksville, Ark.........Od
Cle'burne, Tex..........Ji
Clinton, La..............Rl
Columbia, La............Qj
Columbia, Tex..........Lo
Columbus, Miss.........Vg
Columbus, Tex..........Kn
Corinth (*kŏr'inth*), Miss..Ud
Corpus Christi, Tex......Jr
(*kris'te*)
Corsicana, Tex..........Kj
(*kor-se-kah'na*)
Coushatta Chute, La.....Oj
(*koo-shat'ta shoot*)
Crockett, Tex...........Lk
Cuero (*kway'ro*), Tex....Jo
Dallas, Tex.............Kh
Dardanelle, Ark.........Od
(*dar-da-nel'*)
Deca'tur, Tex..........Jh
Denison, Tex...........Kg
Denton, Tex............Jh
Des Arc (*dez ark*), Ark..Qd
Doaksville, Ind. Ter....Mf
Donaldsonville, La......Qm
Eadsport, La............Uo
Eagle Pass, Tex.........Fp
Edgard', La.............Sm
Eldora'do, Ark..........Ph
(*el-do-rah'do*)
Enterprise, Miss.........Ui
Eufaula, Ind. Ter........Ld
Fairfield, Tex............Lj
Farmersville, La........Ph
Fay'etteville, Ark.......Nb
Forest City, Ark........Rd
Fort Ar'buckle, Ind. Ter..Je
Fort Bliss, Tex..........Aq
Fort Chadbourne, Tex....Fj
Fort Clark, Tex.........Fo
Fort Cobb, Ind. Ter......Id
Fort Con'cho, Tex.......Fk
Fort Davis, Tex.........Al
Fort Duncan, Tex.......Fp
Fort Ewell, Tex.........Hq
Fort Gibson, Ind. Ter...Mc
Fort Griffin, Tex........Gh
Fort Leaton, Tex........An
Fort McKav'ett, Tex.....Fl
Fort Phantomhill, Tex...Gi
Fort Quitman, Tex......Br
Fort Sill, Ind. Ter.......He
Fort Smith, Ark........Nd
Fort Towson, Ind. Ter..Mf
(*tou'son*)
Fort Washita, Ind. Ter...Kf
(*wosh'e-taw*)
Fort Worth, Tex.........Ji
Franklin, La............Rn
Fredericksburg, Tex....Hm
Friar's Point, Miss.......Se
Fulton (*full'ton*), Ark...Og
Gainesville, Ark.........Sb
Gainesville, Tex.........Jg
Galveston, Tex..........Mo
Gatesville, Tex..........Ik
Georgetown, Tex.........Jl
Gibson, Ind. Ter.........Mc
Goliad (*go-le-ad'*), Tex...Jp
Gonzales, Tex...........Jo
(*gon-zah'lez*)
Graham, Tex...........Hh
Grand Gulf, Miss........Rj
Greenville, Miss.........Rg
Greenville, Tex..........Lh
Grena'da, Miss..........Tf
Gretna, La..............Tt
Groesbeck (*grōss'-*), Tex..Kk
Hamburg, Ark..........Qg
Harrisburg, Tex.........Mn
Harrisonburg, La........Qj
Ha'zlehurst, Miss.........Sj
Hearne (*hern*), Tex......Kl
Hel'ena, Ark............Se
Hempstead, Tex.........Lm
Henderson, Tex.........Mj
Henrietta, Tex...........Ig
Hernando, Miss..........Sd
Holly Springs, Miss.....Td
Ho'mer, La.............Ph
Hope, Ark..............Og
Hot Springs, Ark........Pe
Houma (*hoo'mah*), La....Sn
Houston (*hue'ston*), Tex..Mn
Huntsville, Ark.........Ob
Huntsville, Tex..........Ll
Indiano'la, Tex..........Kp
Iu'ka, Miss.............Vd
Jacksboro, Tex..........Ih
Jackson, La.............Rl
Jackson, Miss...........Si
Jacksonport, Ark........Rc
Jasper, Tex.............Nl
Jefferson, Tex...........Ni
Kickapoo', Ind. Ter......Jd
Kosciusko, Miss.........Tg
(*kos-se-us'ko*)
La Grange, Tex.........Kn
(*lah graynj*)
Lake Charles, La........Pm
Lake Providence, La....Rh
Lake Village, Ark.......Rg
Lampasas, Tex..........Il
(*lam-pah'sas*)
Laredo (*la-ray'do*), Tex..Gr
Lewisburg, Ark.........Pd
Lexington, Miss.........Tg
Liberty, Tex............Mn
Lindon, Tex............Nh
Little Rock, Ark........Qe
Locksburg, Ark.........Nf
Longview, Tex..........Mi
Lonoke (*lo-noke'*), Ark...Qe
Ma'con, Miss............Ug
Magnolia, Ark..........Oh
Magnolia, Miss..........Sk
Mansfield, La............Oj
Marksville, La..........Qk
Marlin, Tex.............Kk
Marshall, Tex...........Ni
Matagorda, Tex.........Lp
McAl'ister, Ind. Ter.....Ld
McDonoughville, La.....Ut
(*mak-don'a-vil*)
McKinney, Tex.........Kh
Merid'ian, Miss..........Ui
Milneburg, La...........Tr
Minden, La..............Oi
Monroe, La..............Qi
Montgomery, Tex.......Lm
(*mont-gum'er-e*)
Monticello, Ark.........Qg
Monticello, Miss.........Tj
Morgan City, La........Rn
Mount Pleasant, Tex....Mh
Musco'gee (*-ge*), Ind. T...Lc
Nacogdoches, Tex.......Nk
(*nak-o-do'chiz*)
Napoleon, Ark...........Rf
Narkeeta, Miss..........Vh
Natchez, Miss............Rj
Natchitoch'es, La........Pj
(or, *nak-e-tush'*)
Navaso'ta, Tex..........Lm
New Braunfels, Tex......In
New Iberia, La.........Qm
New Or'leans, La....Tm, Tt
Newport, Ark...........Rc
Oakville, Tex............Ip
Ocmulgee, Ind. Ter......Kc
(*ok-mul'ge*)
Okalo'na, Miss...........Uf
Opelousas, La............Ql
(*op-e-loo'sas*)
Orange, Tex............Om
Osage' Agency, Ind. Ter. Ka.
Oseco'la, Ark............Sc
Oxford, Miss............Te
Ozark', Ark.............Nc
Palestine, Tex...........Lj
Palo Alto, Tex..........Ju
(*pah'lo ahl'to*)
Pa'lo Pin'to, Tex..........Ii
Paris (*păr'is*), Tex.......Lg
Pass Christian, Miss....Um
(*kris-te-ahn'*)
Perryville, Ark..........Le
Pine Bluff, Ark..........Qf
Plaquemine, La.........Rm
(*plak-meen'*)
Pleasanton, Tex.........Hp
Pocahontas, Ark.........Rb
Pontotoc', Miss..........Ue
Port Caddo, Tex.........Ni
Port Gibson, Miss........Rj
Port Hudson, La.........Rl
Pres'cott, Ark...........Of
Princeton, Ark..........Pf
Proctorville, La.........Tm
Quitman, Miss...........Ui
Resaca de la Palma, Tex..Ju
(*ray-sah'kah day lah pahl'-mah*)
Richmond, Tex..........Lo
Rio Grande City, Tex....Ht
(*re'o grahn'day*)
Ripley, Miss.............Ud
Rockport, Tex...........Jq
Rodney, Miss............Rj
Rusk, Tex..............Mj
Russellville, Ark........Pd
Sabine City, Tex.......Nn
(*sa-been'*)
San Antonio, Tex........Ho
San Elizario, Tex........Aq
(*sahn ay-le-zah're-o*)
San Jacinto, Tex........Mn
San Marcos, Tex.........In
San Patricio, Tex.........Ir
(*san pa-tris'se-o*)
San Saba (*sah'ba*), Tex...Hk
Sardis, Miss.............Sc
Searcy (*ser'se*), Ark......Qd
Seguin (*sa-geen'*), Tex.....In
Shawneetown, Ind. Ter..Jd
Sherman, Tex...........Kg
Shreve'port, La..........Oi
Sparta, La..............Pi
Spencer Acad., Ind. Ter..Mf
Starkville, Miss.........Ug
Stephensville, Tex........Ij
St. Francisville, La.......Rl
St. Joseph, La...........Rj
St. Martinsville, La.....Qm
Sulphur Springs, Tex....Lh
Summit, Miss...........Sk
Tahlequah', Ind. Ter....Mc
Terrell', Tex.............Li
Texana (*tex-an'a*), Tex...Kp
Texarkana, Tex., Ark...Ng
(*tex-ar-kan'a*)
Thibodeaux, La..........Sn
(*tib-o-do'*)
Tishimingo, Ind. Ter....Kf
Tu'pelo, Miss............Ue
Tyler, Tex..............Mi
Van Buren, Ark........Nd
Vermillionville, La......Qm
Vicksburg, Miss..........Si
Victoria, Tex............Jp
Vida'lia, La..............Rj
Vinita (*ve-ne'ta*), Ind. T.Ma
Wa'co, Tex..............Jk
Washington, Ark........Of
Washington, La..........Ql
Washington, Tex.......Km
Water Valley, Miss......Te
Waxahachie, Tex.........Ji
Weatherford, Tex........Ih
West Point, Miss........Uf
West'wego, La...........St
Winnsboro, La...........Qi
Winona (*we-no'na*), Miss.Tg
Wittsburg, Ark.........Rd
Woodville, Miss.........Rk
Yazoo City, Miss........Sh
(*yah-zoo'*)

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Sectional Map U. S. No. 5.

Central and North Central States, Eastern Division.

PAGE 55.

Ab'ingdon, Ill...........Do
A'drian, Mich............Ll
Ak'ron, Ohio............On
Albion, Mich............Kl
Al'legan, Mich...........Ik
Alli'ance, Ohio..........On
Alma, Wis..............Bh
Alpe'na, Mich...........Lf
Alton (*awl'ton*), Ill......Dr
Amboy', Ill.............Em
Anderson, Ind...........Jp
Ango'la, Ind............Jm
Anna, Ill...............Eu
Ann Arbor, Mich........Ll
Appleton, Wis...........Fh
Ashland, Ky............Ns
Ashland, Ohio..........Nn
Ashland, Wis...........Cc
Ashtabu'la, Ohio.........Pl
Ath'ens, Ohio...........Nq
Attica, Ind.............Hp
Auburn, Ind............Jn
Augusta, Ky............Ls
Augusta, Wis...........Cg
Auro'ra, Ill.............Fm
Auro'ra, Ind............Kr
Baraboo (*băr'-*), Wis.....Di
Barboursville, Ky.......Lv
Bardstown, Ky..........Ju
Barnesville, Ohio........Op
Bata'via, Ill.............Fm
Bata'via, Ohio...........Lr
Battle Creek, Mich.......Jl
Bay City, Mich..........Li
Beardstown, Ill..........Cp
Beaver Dam, Wis........Fj
Bellaire (*bel-ayr'*), Ohio..Pp
Bellefontaine, Ohio......Lp
(*bel-fon'ten*)
Belleville (*bel'vil*), Ill....Ds
Beloit', Wis.............Ek
Belvidere', Ill............Fl
Bere'a, Ohio............Nn
Ber'lin, Wis.............Fh
Big Rapids, Mich.........Ji
Black River Falls, Wis...Ch
Bloomington, Ill.........Eo
Bloomington, Ind........Hr
Bos'cobel, Wis...........Cj
Bowling Green, Ky......Iv
Brazil', Ind.............Hq
Bryan, Ohio............Km
Buchanan, Mich.........Im
Bucyrus, Ohio..........Mo
(*bu-si'rus*)
Burkesville, Ky.........Jw
Bushnell, Ill............Co
Ca'diz, Ohio.............Pp
Ca'diz, Ky..............Gw
Cal'umet, Mich..........Fb
Cambridge, Ohio (*kame'-*) Op
Cambridge City, Ind.....Jq
(*kame'-*)
Can'ton, Ill..............Do
Can'ton, Ohio...........Oo
Car'bondale, Ill..........Eu
Carlinville, Ill...........Dr
Carmi, Ill...............Ft
Centra'lia, Ill............Es
Centra'lia, Wis..........Dh
Champaign, Ill..........Fp
(*sham-pane'*)
Champion, Mich.........Gc
Charleston, Ill...........Fq
Charlestown, Ind........Js
Charlevoix, Mich.........Jf
(*shar-le-voy'*)
Charlotte, Mich.........Kk
Cheboygan, Mich........Ke
(*she-boy'gan*)
Chester, Ill.............Du
Chicago (*shĭ-kaw'go*), Ill. Gm
Chillicoth'e, Ohio........Mr
Chilton, Wis............Gh
Chip'pewa, Falls, Wis....Cf
Cincinuati, Ohio.........Kr
(*sin-sin-nah'tĭ*)
Circleville, Ohio........Mq
Cleveland, Ohio........Om
Clinton, Ill..............Ep
Clyde, Ohio............Mn
Cold'water, Mich.........Kl
Columbus, Ind...........Ir
Columbus, Ky..........Ew
Columbus, Ohio.........Mp
Columbus, Wis..........Ej
Connersville, Ind........Jq
Constantine, Mich.......Jm
Corunna, Mich..........Kj
Corydon (*kŏr'e-don*), Ind..It
Coshoc'ton, Ohio........Op
Covington, Ind..........Gp
(*kuv'ing-ton*)
Covington, Ky..........Kr
(*kuv'ing-ton*)
Crawfordsville, Ind......Hp
Crestline, Ohio..........No
Cynthiana, Ky..........Kt
(*sin-the-ah'na*)
Danville, Ill............Gp
Danville, Ky............Ku
Darlington, Wis.........Dk
Dayton, Ohio...........Kq
Deca'tur, Ill............Eq
Defi'ance, Ohio..........Kn
De Kalb, Ill.............Fl
Delavan', Wis...........Fk
Delaware, Ohio.........Mp
Delphi, Ind.............Ho
Delphos, Ohio..........Ko
De Pere, Wis...........Gh
Detroit', Mich...........Ml
Dixon, Ill..............Em
Dowagiac, Mich..........Il
(*do-way'je-ak*)
Du Quoin, Ill............Et
Dwight, Ill..............Fn
East Saginaw, Mich......Li
East St. Louis, Ill.......Ds
Eau Claire, Wis.........Bg
(*o-klare'*)
Edwardsville, Ill........Ds
Effingham, Ill...........Fr
Elgin (*el'jin*), Ill........Fl
Elizabethtown, Ky.......Iu
Elkhart, Ind............Im
Elkhorn, Wis...........Fk
El Paso (*el pah'so*), Ill...Eo
Elyrea (*e-lĭr'e-a*), Ohio..Nm
Escanaba, Mich.........He
(*es-ka-naw'ba*)
Ev'anston, Ill............Gl
Ev'ansville, Ind.........Gt
Fairbury, Ill.............Fo
Farwell, Mich...........Ki
Fenton, Mich...........Lk
Findlay, Ohio...........Ln
Flint, Mich..............Lj
Fond du Lac, Wis........Fi
Fort Atkinson, Wis......Fj
Fort Howard, Wis.......Gg
Fort Wayne, Ind........Jn
Fosto'ria, Ohio..........Ln
Fountain City, Wis......Bh
Frankfort, Ind..........Hp
Frankfort, Ky...........Kt
Franklin, Ind............Iq
Franklin, Ky............Iw
Freeport, Ill.............El
Fremont', Ohio.........Mm
Fulton (*full'ton*), Ill....Dm
Gale'na, Ill..............Dk
Galesburg, Ill...........Dn
Galesville, Wis..........Ch
Gal'ion, Ohio...........Mo
Gallip'olis, Ohio.........Ns
Galva, Ill...............Dn
Gaylord, Mich...........Kf
Genese'o, Ill............Dm
Gene'va, Wis............Fk
Georgetown, Ky.........Kt
Gibson City, Ill.........Fp
Gilman, Ill..............Go
Glasgow, Ky............Iv
Golconda, Ill............Fv
Go'shen, Ind............Im
Grand Haven, Mich.......Ij
Grand Rapids, Mich......Jj
Grand Rapids, Wis......Eh
Grayson, Ky............Mt
Green Bay, Wis.........Gh
Green'castle, Ind........Hq
Greensburg, Ind.........Jr
Greenville, Mich.........Jj
Greenville, Ohio.........Kp
Hamilton, Ohio..........Kr
Hancock, Mich..........Fb
Harrodsburg, Ky........Ku
Hartford City, Ind.......Jp
Harvard, Ill.............Fl
Hastings, Mich..........Jk
Havan'a, Ill.............Dp
Hawesville, Ky..........Hu
Hazard, Ky.............Mv
Henderson, Ky..........Gu
Henry, Ill...............En
Hickman, Ky...........Ew
Hillsboro, Ill............Er
Hillsboro, Ky............Lt
Hillsboro, Ohio..........Lr
Hillsdale, Mich..........Kl
Holland, Mich...........Ik
Holly, Mich.............Lk
Hoopeston, Ill...........Gp
Hopkinsville, Ky........Gv
Houghton (*ho'ton*), Mich.Fb
Howard City, Mich.......Jj
Howell, Mich............Lk
Hudson, Mich..........Km
Hudson, Wis............Af
Huntington, Ind.........Jo
Hyde Park, Ill..........Gm
Indianap'olis, Ind........Iq
Ionia, Mich..............Jj
Ironton (*i'urn-ton*), O....Ns
Ish'peming, Mich........Gd
Jackson, Ky............Mu
Jackson, Mich...........Kl
Jackson, Ohio...........Nr
Jacksonville, Ill.........Dq
Janesville, Wis..........Ek
Jasper, Ind..............Ht
Jefferson, Ohio..........Pm
Jefferson, Wis............Fj
Jeffersonville, Ind........It
Jenny, Wis..............Ef
Jerseyville, Ill...........Cr
Jo'liet, Ill..............Gm
Kalamazoo', Mich........Jl
Kankakee', Ill...........Gn
Kendallville, Ind........Jm
Keno'sha, Wis...........Gk
Kentland, Ind...........Go
Kenton, Ohio............Lo
Kewanee, Ill............Dn
(*ke-wah'ne*)
Kewau'nee, Wis.........Gh
Kilbourn City, Wis......Di
Ko'komo, Ind............Io
La'con, Ill..............En
La Crosse, Wis..........Ci
(*lah kross*),
Lafayette, Ind..........Hp
(*laf-ay-yet'*)
La Grange, Ky...........Jt
(*lah graynj*)
Lancaster, Ohio.........Nq
L'Anse, Mich............Fc
Lansing, Mich..........Kk
Lapeer', Mich...........Mj
La Pointe, Wis..........Dc
La Porte, Ind..........Hm
La Salle, Ill.............En
Lawrenceburg, Ind......Kr
Lebanon, Ky............Ju
Lebanon, Ohio..........Lq
Lemont' Ill.............Gm
Lexington, Ky...........Kt
Lexington, Mich.........Mj
Liberty, Ky.............Kv
Li'ma, Ohio.............Lo
Lincoln, Ill..............Ep
Litchfield, Ill...........Dr
Lo'gan, Ohio............Nq
Lo'gansport, Ind.........Io
London, Ky.............Lv
London, Ohio...........Lq
Louisa, Ky.............Mt
Louisville, Ky............Jt
Lowell (*lo'el*), Mich......Jk
Ludington, Mich..........Ii
Mackinaw, Mich.........Ke
Macomb (*ma-koom'*), Ill..Co
Madison, Ind............Js
Madison, Wis............Ej
Madisonville, Ky........Gv
Manistee', Mich..........Ih
Manitowoc', Wis........Gh
Mansfield, Ohio..........No
Marietta, Ohio...........Oq
Marinette, Wis...........Gf
(*măr-ĭ-net'*)
Marion (*măr'e-on*), Ind...Io
Marion (*măr'e-on*), Ohio.Mo
Marquette, Mich.........He
(*mar-ket'*)

Marshall, Mich............Jl
Mascoutah (*-koo'-*), Ill...Ds
Mas'sillon, Ohio..........Oo
Mattoon', Ill.............Fq
Maysville, Ky.............Ls
McLeansboro, Ill..........Ft
(*ma-klaynz'bur-rŭh*)
Medford, Wis..............Df
Menash'a, Wis.............Fh
Mendo'ta, Ill.............Em
Menom'onee, Mich..........Gf
Menom'onee, Wis...........Bf
Mer'rillon, Wis...........Cg
Metropolis, Ill...........Ev
Michigan City, Ind........Hm
Middleport, Ohio..........Nr
Middletown, Ohio..........Kq
Milwau'kee, Wis...........Gj
Mineral Point, Wis........Dj
Moline (*mo-leen'*), Ill...Dm
Monmouth, Ill.............Co
(*mon'muth*)
Monroe, Mich..............Mm
Monroe, Wis...............Ek
Monticello, Ky............Kw
Morris, Ill...............Fm
Mount Carmel, Ill.........Gs
Mount Carroll, Ill........Dl
Mount Clem'ens, Mich...Mk
Mount Sterling, Ky........Lt
Mount Vernon, Ind.........Gt
Mount Vernon, Ky..........Lu
Mount Vernon, Ohio........No
Muncie, Ind...............Jp
Munfordsville, Ky.........Iv
Muske'gon, Mich...........Ij
Napoleon, Ohio............Lm
Nashville, Ill............Et
Nauvoo', Ill..............Bo
Nee'nah, Wis..............Fh
Negau'nee, Mich...........Gd
Neillsville, Wis..........Dg
New Albany, Ind...........It
(*awl'ba-ne*)
Newark, Ohio..............Np
Neway'go, Mich............Ij
New Boston, Ill...........Cn
Newcastle, Ind............Jq
(*nu'kas-sel*)
New Lisbon, Wis...........Di
New London, Ohio..........Nn
New London, Wis...........Fh
New Philadelphia, Ohio..Oo
Newport, Ky...............Kr
Nicholasville, Ky.........Kt
Niles, Mich...............Im
Nortonville, Ky...........Gv
Norwalk (*nor'wok*), Ohio.Mn
O'berlin, Ohio............Nn
Oconom'owoc, Wis..........Fj
Ocon'to, Wis..............Gg
Olney, Ill................Fs
Omro, Wis.................Fh
Ontonag'on, Mich..........Ec
Oregon, Ill...............El
Osceo'la Mills, Wis.......Af
Oshkosh, Wis..............Fh
Otse'go Lake, Mich........Kg
Ottawa, Ill...............En
Owensboro, Ky.............Hu
Owos'so, Mich.............Kj
Ozau'kee, Wis.............Gj
Padu'cah, Ky..............Fv
Painesville, Ohio.........Om
Pa'na, Ill................Er
Paris (*păr'is*), Ill.....Gq
Paris (*păr'is*), Ky......Lt
Paw Paw, Mich.............Il
Paxton, Ill...............Fo
Pe'kin, Ill...............Do
Pent'water, Mich..........Ii
Peoria, Ill...............Do
Peru', Ill................En
Peru', Ind................Io
Pesh'tigo, Wis............Gf
Petersburg, Ill...........Dp
Petos'key, Mich...........Jf
Piketon, Ky...............Nu
Pineville, Ky.............Lw
Piqua (*pik'wa*), Ohio....Kp
Platteville, Wis..........Dk
Plymouth, Ind.............In
(*plim'uth*)
Pom'eroy, Ohio............Nr
Pontiac, Ill..............Fo
Pontiac, Mich.............Mk
Portage, Wis..............Ei
Port Austin, Mich.........Mh
Port Huron, Mich..........Mj
Portsmouth, Ohio..........Ms
(*ports'muth*)
Prairie du Chien, Wis....Cj
(*sheen*)
Pres'cott, Wis............Ag
Princeton, Ill............Em
Princeton, Ind............Gt
Princeton, Ky.............Gv

Quincy, Ill...............Bp
Racine (*ra-seen'*), Wis....Gk
Ravenna, Ohio.............On
Reed City, Mich...........Ji
Richmond, Ind.............Kq
Richmond, Ky..............Lu
Ripley, Ohio..............Ls
Rip'on, Wis...............Fi
Rochester, Ind............In
Rockford, Ill.............El
Rock Island, Ill..........Cm
Rockport, Ind.............Ht
Ro'meo, Mich..............Mk
Rushville, Ind............Jq
Russellville, Ky..........Hw
Saginaw, Mich.............Li
Salem, Ohio...............Pn
Sandus'ky, Ohio...........Mm
Saugatuck', Mich..........Ik
Sauk City, Wis............Dj
Sault de Ste. Marie, Mich.Kd
(*soo de sent may'ree*)
Scott, Ohio...............Lr
Seymour, Ind..............Is
Shawano, Wis..............Fg
(*shaw'nŏh*)
Shawneetown, Ill..........Fu
Sheboy'gan, Wis...........Gi
Shelbyville, Ill..........Fr
Shelbyville, Ind..........Jq
Shelbyville, Ky...........Jt
Sidney, Ohio..............Lp
Somerset, Ky..............Kv
(*sum'er-set*)
South Bend, Ind...........Im
South Haven, Mich.........Il
Sparta, Wis...............Ch
Springfield, Ill..........Dq
Springfield, Ohio.........Lq
St. Clair, Mich...........Mk
Sterling, Ill.............Dm
Steu'beuville, Ohio.......Po
Stevens Point, Wis........Eg
St. Joseph, Mich..........Hl
St. Mary's, Ohio..........Ko
Strea'tor, Ill............Fn
Sturgis, Mich.............Jm
Sullivan, Ind.............Gr
Superior, Wis.............Bc
Taw'as City, Mich.........Lh
Taylorville, Ill..........Eq
Tecumseh, Mich............Ll
Tell City, Ind............Ht
Terre Haute, Ind..........Gq
(*tĕr'reh hote*)
Three Rivers, Mich........Jl
Tiffin, Ohio..............Mn
Tipton, Ind...............Ip
Tole'do, Ohio.............Lm
To'mah, Wis...............Dh
Traverse City, Mich.......Jg
Trempealeau, Wis..........Ch
(*trem'pe-lo*)
Troy, Ohio................Lp
Tusco'la, Ill.............Fq
Union City, Ind...........Kp
Uniontown, Ky.............Gu
Upper Sandus'ky, Ohio..Mo
Urban'a, Ill..............Fp
Urban'a, Ohio.............Lp
Valparaiso, Ind...........Hm
(*val-pa-ray'zo*)
Vanda'lia, Ill............Er
Van Wert, Ohio............Ko
Versailles, Ky............Kt
(*ver-saylz'*)
Vincennes, Ind............Gs
(*vin-senz'*)
Virden, Ill...............Dq
Viro'qua, Wis.............Ci
Wabash (*waw'bash*), Ind..Io
Warren, Ohio..............Pn
Warsaw, Ill...............Bp
Warsaw, Ind...............In
Washington, Ind...........Hs
Watertown, Wis............Fj
Watse'ka, Ill.............Go
Wauke'gan, Ill............Gl
Wau'kesha, Wis............Fj
Waupaca, Wis..............Eh
(*waw-pah'kah*)
Waupun, Wis...............Fi
Wausau, Wis...............Eg
Wellsville, Ohio..........Po
Weno'na, Mich.............Li
White'water, Wis..........Fk
Winchester, Ky............Lt
Woodstock, Ill............Fl
Wooster, Ohio.............No
Worcester, Wis............Dc
(*wo͝os'ter*)
Wyandotte, Mich...........Ml
(*wi-an-dot'*)
Xenia (*ze'ne-a*), Ohio....Lq
Youngstown, Ohio..........Pn
Ypsilan'ti (*-te*), Mich.....Ll
Zanesville, Ohio..........Np

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Central and North Central States, Western Division.

PAGE 57.

Ab'ilene, Kan.............Hv
Ackley, Iowa..............Mo
Adel', Iowa...............Lq
Afton, Iowa...............Lr
Aitkin (*ayt'kin*), Minn...Lg
Albert Lea, Minn..........Mm
Albia, Iowa...............Nr
Alexandria, Minn..........Ji
Algo'na, Iowa.............Ln
Ano'ka, Minn..............Mj
Arkan'sas City, Kan.......Iv
Ashland, Neb..............Ir
Atchison, Kan.............Ku
Atlantic, Iowa............Kq
Au'dubon (*-doo-*), Minn..Jg
Augusta, Kan..............Ix
Austin, Minn..............Mm
Baxter Springs, Kan.......Kv
Beatrice (*be'a-treece*), Neb.Is
Belle Plaine, Iowa........Np
(*bel plain*)
Bel'mont, Mo..............Ry
Beloit', Kan..............Gu
Benson, Minn..............Jj
Bethany, Mo...............Ls
Bismarck (*biz'-*), Dak....Eg
Blair, Neb................Jq
Bloomfield, Iowa..........Nr
Blue Earth City, Minn..Lm
Blue Rapids, Kan..........It
Bol'ivar, Mo..............Mx
Bon Homme (*hom*), Dak.Hn
Boone, Iowa...............Lp
Boonesboro, Iowa..........Lp
Boonville, Mo.............Nv
Brainerd, Minn............Lh
Breckenridge, Minn........Ih
Brownville, Neb...........Js
Brulé (*-lay'*) City, Dak..Fm
Brunswick, Mo.............Mu
Burlingame, Kan...........Jv
(*bur'ling-game*)
Burlington, Iowa..........Pr
Burlington, Kan...........Jw
Butler, Mo................Lw
Calhoun, Neb..............Jq
California, Mo............Nv
Cameron, Mo...............Lt
Camp Robinson, Neb........An
Camp Sheridan, Neb........Bu
Can'ton, Dak..............In
Can'ton, Mo...............Os
Cape Girardeau, Mo........Rx
(*je-rar'do*)
Carroll, Iowa.............Kp
Carrollton, Mo............Mu
Carthage, Mo..............Lv
Carver, Minn..............Mk
Cedar Falls, Iowa.........No
Cedar Rapids, Iowa........Op
Central City, Dak.........Ak
Centreville, Iowa.........Mr
Char'iton, Iowa...........Mr
Charles City, Iowa........Nn
Charleston, Mo............Ry
Chatfield, Minn...........Nl
Cherokee', Iowa...........Jo
Cheto'pa (*she-*), Kan.....Ky
Chillicoth'e, Mo..........Mt
Clarin'da, Iowa...........Kr
Clarksville, Mo...........Pu
Clay Center, Kan..........Hu
Clinton, Iowa.............Qp
Clinton, Mo...............Mw
Coffeyville, Kan..........Jy
Columbia, Mo..............Nu
Columbus, Neb.............Hq
Concordia, Kan............Hu
Cottonwood Falls, Kan...Iw
Cottonwood Springs, Neb.Dr
Council Bluffs, Iowa......Jr
Council Grove, Kan........Iv
Cresco, Iowa..............Nm
Creston, Iowa.............Lr
Crete, Neb................Is
Crookston, Minn...........Ic
Crow Wing, Minn...........Lh
Custer, Dak...............Al
Dako'ta, Neb..............Io
Dav'enport, Iowa..........Pp
David City, Neb...........Hr
Deadwood, Dak.............Ak
Deca'tur, Neb.............Jp
Deco'rah, Iowa............Om
Denison, Iowa.............Kp
Des Moines, Iowa..........Mq
(*de-moin'*)

De So'to, Mo..............Qw
Detroit', Minn............Jg
De Witt, Iowa.............Pp
De Witt, Neb..............Is
Dodge City, Kan...........Ex
Don'iphan, Mo.............Qz
Dubuque (*-buke'*), Iowa...Po
Duluth (*du-looth'*), Minn.Ng
Edi'na, Mo................Os
Eldo'ra, Iowa.............Mo
Eldorado, Kan.............Ix
(*el-do-rah'do*)
Elk Point, Dak............Io
Ellis, Kan................Fv
Emmettsburg, Iowa.........Kn
Empire City, Kan..........Ly
Empo'ria, Kan.............Jw
Eure'ka, Kan..............Jx
Fairbury, Neb.............Ht
Fairfield, Iowa...........Or
Falls City, Neb...........Jt
Fargo, Dak................Ig
Faribault, Minn...........Ml
(*făr-e-bo'*)
Farmington, Minn..........Mk
Fergus Falls, Minn........Jh
Flandreau (*flan'dro*), Dak.Il
Florence, Kan.............Iw
Forsyth (*for-sīth'*), Mo..Nz
Fort Ab'ercrombie, Dak..Ih
Fort Abr. Lincoln, Dak..Dg
Fort Ber'thold, Dak.......Ce
Fort Bu'ford, Dak.........Ad
Fort Clark, Dak...........Df
Fort Dodge, Iowa..........Lo
Fort Madison, Iowa........Or
Fort Pierre (*peer*), Dak..Ek
Fort Randall, Dak.........Gn
Fort Ransom, Dak..........Hh
Fort Rice, Dak............Eg
Fort Riley, Kan...........Iu
Fort Scott, Kan...........Kx
Fort Sis'seton, Dak.......Hi
Fort Stevenson, Dak.......De
Fort Sully, Dak...........Ek
Fort Totten, Dak..........Fe
Fredo'nia, Kan............Jx
Fremont', Neb.............Iq
Fulton (*full'ton*), Mo....Ov
Garnett, Kan..............Kw
Ga'ry, Dak................Ik
Gayville, Dak.............Hn
Girard (*je-rard'*), Kan...Kx
Glasgow, Mo...............Nu
Glen'coe, Minn............Lk
Glenwood, Iowa............Jr
Glyndon, Minn.............Ig
Grand Forks, Dak..........Ie
Grand Island, Neb.........Gr
Great Bend, Kan...........Fw
Grinnell', Iowa...........Np
Hamburg, Iowa.............Js
Hampton, Iowa.............Mn
Hannibal, Mo..............Pt
Hartville, Mo.............Ny
Hastings, Minn............Mk
Hastings, Neb.............Gs
Hays City, Kan............Fv
He'bron, Neb..............Ht
Henderson, Minn...........Lk
Hermann, Mo...............Pv
Hiawa'tha, Kan............Jt
Ho'kah, Minn..............Om
Hold'en, Mo...............Lv
Holton (*hole'ton*), Kan...Ju
Humboldt, Kan.............Kx
(*hum'bōlt*)
Huntsville, Mo............Nu
Hutchinson, Kan...........Hw
Independence, Iowa........Oo
Independence, Kan.........Jy
Independence, Mo..........Lv
Indiano'la, Iowa..........Mq
Io'la, Kan................Kx
I'owa City, Iowa..........Op
Iron Mountain, Mo.........Qx
Ironton (*ī'urn-ton*), Mo..Qx
Jamestown, Dak............Gg
Jefferson, Iowa...........Lp
Jefferson City, Mo........Ov
Jewell, Kan...............Gt
Joplin, Mo................Ly
Junction City, Kan........Iv
Juniata, Neb..............Gs
(*joo-ne-at'a*)
Kampeska, Dak.............Hj
Kansas City, Mo...........Lv
Kasson, Minn..............Ml
Kearney (*kar'ne*), Neb...Fs
Ke'okuk, Iowa.............Os
Keosau'qua, Iowa..........Or
Kirksville, Mo............Ns
Kirwin, Kan...............Ft
Knoxville, Iowa...........Mq
La Cygne (*lah seen*), Kan.Kw
La Grange, Mo.............Ot
(*lah graynj*)

Lake City, Minn...........Nk
La'kin, Kan...............Cx
Lansing, Iowa.............Om
Lar'ned, Kan..............Fw
Lawrence, Kan.............Kv
Leavenworth, Kan..........Ku
(*lev'en-wurth*)
Lebanon, Mo...............Nx
Lecompton, Kan............Kv
Le Mars, Iowa.............Jo
Le'on, Iowa...............Mr
Lexington, Mo.............Mu
Liberty, Mo...............Lu
Lincoln, Neb..............Ir
Litchfield, Minn..........Kj
Little Falls, Minn........Li
Louisiana, Mo.............Pt
Luverne, Minn.............Jm
(*loo-vern'*)
Lyons, Iowa...............Qp
Lyons, Kan................Gw
Ma'con, Mo................Nt
Magnolia, Iowa............Jq
Manchester, Iowa..........Oo
Manhattan, Kan............Iu
Mankato (*-kah'-*), Minn..Ll
Mantorville, Minn.........Ml
Maquoketa, Iowa...........Pp
(*ma-ko'ke-ta*)
Marengo, Iowa.............Np
Marion (*măr'e-on*), Iowa..Op
Marshall, Mo..............Mu
Marshalltown, Iowa........Np
Marysville, Kan...........It
Maryville, Mo.............Ks
Mason City, Iowa..........Mn
Maxwell, Dak..............Hn
McGregor, Iowa............On
Med'ary, Dak..............Ik
Memphis, Mo...............Ns
Mexico, Mo................Ou
Minneap'olis, Kan.........Hu
Minneap'olis, Minn........Mj
Mob'erly, Mo..............Nu
Montezu'ma, Iowa..........Nq
Monticello, Iowa..........Oo
Monticello, Minn..........Lj
Moorhead, Minn............Ig
(*more'hed*)
Mount Pleasant, Iowa....Or
Muscatine, Iowa...........Pq
(*mus-ka-teen'*)
Nebraska City, Neb........Js
Neo'sho, Mo...............Lz
Nevada, Iowa..............Mp
(*ne-vah'da*)
Nevada (*ne-vah'da*), Mo..Lx
New Mad'rid, Mo...........Rz
Newton, Iowa..............Mp
Newton, Kan...............Hw
New Ulm, Minn.............Kl
Niobra'ra, Neb............Go
Norfolk (*nor'fok*), Neb...Hp
Northfield, Minn..........Mk
North Platte, Neb.........Dr
Northwood, Iowa...........Mm
Oakdale, Neb..............Gp
Ola'the, Kan..............Kv
Ol'ivet, Dak..............Hn
Omaha (*o'ma-haw*), Neb..Jr
Onawa (*on'a-wa*), Iowa...Jp
Or'leans, Neb.............Ft
Ortonville, Minn..........Ij
Osage', Iowa..............Nm
Osage' City, Kan..........Jv
Osage' Mission, Kan.......Kx
Osawat'omie, Kan..........Kw
Osborne, Kan..............Gu
Osceo'la, Iowa............Mr
Oskaloosa, Iowa...........Nq
Oskaloosa, Kan............Ku
Oswe'go, Kan..............Ky
Ottawa, Kan...............Kv
Ottum'wa, Iowa............Nr
Owaton'na, Minn...........Ml
Palmy'ra, Mo..............Ot
Pao'la, Kan...............Kv
Parsons, Kan..............Kv
Pawnee City, Neb..........Jt
Pella, Iowa...............Nq
Pem'bina, Dak.............Hc
Plattsburg, Mo............Lu
Plattsmouth, Neb..........Jr
Pleasant Hill, Mo.........Lv
Pleasanton, Kan...........Kw
Ponca, Neb................Io
Poplar Bluff, Mo..........Qy
Poto'si, Mo...............Pw
Red Cloud, Neb............Gt
Red Cloud Agency, Neb.An
Red Oak, Iowa.............Kr
Red Wing, Minn............Nk
Redwood Falls, Minn.......Kk
Rochester, Minn...........Nl
Rockport, Dak.............Hm
Rolla, Mo.................Ow
Ru'lo, Neb................Jt

Rush City, Minn...........Mi
Rushford, Minn............Ol
Russell, Kan..............Gv
Salem, Mo.................Px
Sali'na, Kan..............Hv
Sauk Center, Minn.........Ki
Sauk Rapids, Minn.........Li
Savannah, Mo..............Kt
Schuyler (*ski'ler*), Neb...Iq
Seda'lia, Mo..............Mv
Sen'eca, Kan..............Jt
Seward (*su'ard*), Neb....Hr
Shak'opee, Minn...........Mk
Shelbi'na, Mo.............Ot
Sheridan, Kan.............Du
Sibley, Iowa..............Jm
Sidney, Iowa..............Jr
Sidney, Neb...............Bq
Sig'ourney, Iowa..........Nq
Sioux City (*soo*), Iowa....Jo
Sioux Falls (*soo*), Dak....Im
Solomon City, Kan.........Hv
Spirit Lake, Iowa.........Km
Spotted Tail Agen., Neb..Bu
Springfield, Dak..........Ho
Springfield, Mo...........Mv
Spring Valley, Minn.......Nm
St. Charles, Minn.........Nl
St. Charles, Mo...........Qv
St. Cloud, Minn...........Li
St. Genevieve, Mo.........Qw
(*jen-e-veev'*)
St. Hele'na, Neb..........Ho
Still'water, Minn.........Mj
St. Joseph, Dak...........Hc
St. Joseph, Mo............Kt
St. Louis, Mo.............Qv
Stockton, Kan.............Fu
Stockville, Neb...........Es
St. Paul, Minn............Mj
St. Paul, Neb.............Gr
St. Peter, Minn...........Ll
St. Vincent, Minn.........Ic
Sutton, Neb...............Hs
Swan Lake, Dak............Hn
Taylor's Falls, Minn......Mj
Tecumseh, Neb.............Js
Teka'mah, Neb.............Jp
Thomson, Minn.............Ng
(*tom'son*)
Tope'ka, Kan..............Jv
Troy, Kan.................Kt
Union, Mo.................Pv
Unionville, Mo............Ms
Valley Falls, Kan.........Ju
Vermillion, Dak...........Io
Vinton, Iowa..............Np
Wabasha, Minn.............Nk
(*waw'ba-shaw*)
Wahoo (*wah-hoo'*), Neb...Ir
Wallace, Kan..............Cv
Warrensburg, Mo...........Mv
Waseca (*wah-se'ka*), Minn.Ml
Washington, Iowa..........Oq
Washington, Kan...........It
Washington, Mo............Pv
Waterloo', Iowa...........No
Waterville, Kan...........It
Waverly, Iowa.............Nn
Webster City, Iowa........Lo
Wells, Minn...............Mm
Weston, Mo................Ku
West Point, Neb...........Ip
West Union, Iowa..........On
White Cloud, Kan..........Kt
Wich'ita, Kan.............Hx
Wilmar, Minn..............Kj
Winfield, Kan.............Iv
Winneba'go, Minn..........Lm
Winona (*we-no'na*), Minn.Ol
Winterset, Iowa...........Lq
Worthington, Dak..........Hg
Worthington, Minn.........Jm
Wyandotte, Kan............Ku
(*wi-an-dot'*)
Yankton, Dak..............Hn

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Sectional Map U. S. No. 7.

Rocky Mountain and Pacific States and Territories, Northern Division.

PAGE 61.

Albany (*awl'ba-ne*), Ore..Cg
Argenta, Mont.............Kf
Ashland, Ore..............Bj
Asto'ria, Wash............Bc
Atlantic City, Wyo........Oj
Baker City, Ore...........Gg
Bannack City, Mont........Kg

Big Horn, Mont	Oe
Boisé City (*boy'se*), Id. T.	Hi
Bozeman, Mont	Lf
Bryan, Wyo	Nk
Butte (*bute*) City, Mont	Kf
Cable City, Mont	Kc
Camp Baker, Mont	Ld
Carbon, Wyo	Qk
Cariboo (*kăr'e-boo*), Id. T.	Li
Cheyenne (*shi-en'*), Wyo.	Rk
Claquato, Wash	Cd
(*klah-kwah'to*)	
Colfax (*kole'fax*), Wash	Gd
Corval'lis, Ore	Bg
Dallas, Ore	Bg
Dalles (*dalz*), The, Ore	Df
Dayton, Wash	Ge
Deer Lodge City, Mont	Ke
Diamond City, Mont	Le
Eagle Rock, Id. T.	Li
Elk City, Id. T.	If
Ellensburg, Ore	Aj
Elma, Wash	Cd
Emmettsburg, Mont	Ke
Empire City, Ore	Ai
Eugene City, Ore	Bh
Ev'anston, Wyo	Ml
Florence, Id. T.	If
Forest Grove, Ore	Cf
Fort Benton, Mont	Lc
Fort Bridger, Wyo	Ml
Fort C. F. Smith, Mont	Of
Fort Colville, Wash	Gb
Fort D. A. Russell, Wyo.	Rk
Fort Ellis, Mont	Lf
Fort Fetterman, Wyo	Qi
Fort Hall, Id. T.	Li
Fort Halleck, Wyo	Pk
Fort Lapwai, Id. T.	He
(*lap'way*)	
Fort Laramie (*lăr'-*), Wyo.	Rj
Fort Lemhi, Id. T.	Jg
Fort Okin'akane, Wash	Fb
Fort Owen, Mont	Je
Fort Peck, Mont	Pb
Fort Phil Kearney, Wyo	Pg
(*kar'ne*)	
Fort Re'no, Wyo	Ph
Fort Shaw, Mont	Lc
Fort Steele, Wyo	Pk
Gal'latin, Mont	Lf
Green River City, Wyo	Nk
Harrisburg, Ore	Bg
Hel'ena, Mont	Kc
I'daho City, Id. T.	Ih
Jacksonville, Ore	Bj
Junction City, Ore	Bh
La Grande (*lah*), Ore	Gf
Laramie City (*lăr'-*), Wyo.	Qk
Lewiston, Id. T.	He
Malade City, Id. T.	Kk
(*mah-lahd'*)	
McMinnville, Ore	Bf
Missoula, Mont	Jd
(*miz-zoo'lạ*)	
Monticello, Wash	Ce
Montpelier, Id. T.	Lj
(*mont-peel'yẹr*)	
Mussel Shell City, Mont.	Nc
New Taco'ma, Wash	Cc
Oakland, Ore	Bh
Olympia, Wash	Cd
Oneida (*o-ni'dạ*), Id. T.	Lj
Oregon City, Ore	Cf
Oysterville, Wash	Bd
Pendleton, Ore	Ff
Pierce City, Id. T.	Ic
Pioneer'ville, Id. T.	Ih
Pla'cerville, Id. T.	Hh
Portland, Ore	Cf
Port Orford, Ore	Ai
Port Townsend, Wash	Cb
Ra'dersburg, Mont	Le
Rawlins, Wyo	Pk
Rocky Bar, Id. T.	Ii
Roseburg, Ore	Bi
Salem, Ore	Cg
Salmon City, Id. T.	Jg
(*sam'ọn*)	
Scio (*si'o*), Ore	Cg
Seattle, Wash	Cc
Sherman, Wyo	Rl
Silver City, Id. T.	Hj
Snoho'mish, Wash	Db
Soda Springs, Id. T.	Lj
South Pass City, Wyo	Nj
Steilacoom, Wash	Cd
(*sti'lạ-koom*)	
Tum'water, Wash	Cd
Umatilla (*yu-*), Ore	Ff
Union, Ore	Gg
Vancouver, Wash	Cf
(*van-koo'vẹr*)	
Virginia City, Mont	Lf
Waitsburg, Wash	Ge
Walla Walla, Wash	Ge
(*wol'lạ wol'lạ*)	
Wallula, Wash	Fe
(*wol-loo'lạ*)	
Washington, Id. T.	Ig
Whatcom, Wash	Ca
(*what'kọm*)	
Wyo'ming, Wyo	Qk
Yakima, Wash	Ee
(*yak'e-mah*)	

◆

Sectional Map U. S. No. 8.

Rocky Mountain and Pacific States and Territories, Southern Division.

PAGE 62.

Alameda, Cal	Bh
(*ah-lah-may'dah*)	
Alamosa, Col	Si
(*al-ạ-mo'sạ*)	
Albuquerque, N. Mex	Rl
(*ahl-boo-kĕr'kay*)	
Alma, Col	Rf
American Fork, Utah	Le
Anaheim, Cal	Fn
(*ah'nah-hime*)	
Arivaca, Ariz	Mr
(*ăr-e-vah'kạ*)	
Aubrey City, Ariz	Jm
Auro'ra, Nev	Fg
Austin, Nev	Gf
Bakersfield, Cal	El
Battle Mountain, Nev	Gd
Beaver, Utah	Lh
Belen (*bay-len'*), N. Mex.	Rm
Bel'mont, Nev	Gg
Bernalillo, N. Mex	Rl
(*bĕr-nah-le'yo*)	
Black Hawk, Col	Se
Boulder, Col	Se
Brigham City, Utah	Lc
Brooklyn, Cal	Bh
Bullionville, Nev	Jh
Callville, Nev	Jk
Cañon City (*kan'yọn*), Col.	Sq
Carlin, Nev	Hd
Carson City, Nev	Ef
Cedar City, Utah	Kh
Central City, Col	Se
Cherry Creek, Nev	Ie
Chico (*che'ko*), Cal	Ce
Cimarron, N. Mex	Tj
(*se-mah-rone'*)	
Clo'verdale, Cal	Bf
Colorado Springs, Col	Tf
(*kol-o-rah'do*)	
Columbus, Nev	Fh
Colu'sa, Cal	Cf
Corinne (*ko-rin'*), Utah	Lc
Coro'na, Col	Td
Crescent City, Cal	Aa
Crittenden, Ariz	Nr
Cucharas, Col	Th
(*koo-chah'rahs*)	
Del Norte (*nor'tay*), Col	Rh
Denver, Col	Se
Des'eret, Utah	Lf
Dona Ana, N. Mex	Rp
(*do'nah ah'nah*)	
Eb'erhardt, Nev	If
Ehrenberg, Ariz	Jo
(*ay'rẹn-berg*)	
Elizabethtown, N. Mex	Si
Elko, Nev	Id
Empire City, Nev	Ef
E'phraim City, Utah	Mf
Eure'ka, Ariz	Jo
Eure'ka, Cal	Ac
Eure'ka, Nev	Hf
Fernandez de Taos, N. Mex.	Sj
(*tah'oce*)	
Fillmore, Utah	Lg
Florence, Ariz	Mo
Fort Bascom, N. Mex	Uk
Fort Bayard, N. Mex	Pp
(*bi'ạrd*)	
Fort Bidwell, Cal	Eb
Fort Collins, Col	Sd
Fort Garland, Col	Sh
Fort Lyon, Col	Ug
Fort Sedgwick, Col	Vc
Fort Selden, N. Mex	Rp
Fort Stanton, N. Mex	Sn
Fort Sumner, N. Mex	Um
Fort Union, N. Mex	Tk
Fort Wingate, N. Mex	Pk
Fort Yu'ma, Cal	Jp
Fresno, Cal	Ej
Frisco, Utah	Kh
Gen'oa, Nev	Ef
Georgetown, Col	Se
Gila City (*he'lah*), Ariz	Jp
Gilroy (*ḡil-roy'*), Cal	Ci
Glenwood, Utah	Lg
Golden, Col	Se
Gold Hill, Nev	Ef
Granada, Col	Vg
(*grạ-nah'dạ*)	
Grant City, Nev	Ig
Grass Valley, Cal	Df
Greeley, Col	Sd
Hamilton, Nev	If
Hardyville, Ariz	Jl
Healdsburg, Cal	Bf
He'ber, Utah	Md
Hi'ko, Nev	Ii
Hollister, Cal	Ci
Hu'go, Col	Uf
Humboldt, Nev	Fd
(*hum'bōlt*)	
Independence, Cal	Fj
Jackson, Cal	Dg
Julesburg, Col	Vc
Kit Karson, Col	Uf
La Junta, N. Mex	Sk
(*lah hoon'tah*)	
Lake City, Col	Qh
Lakeport, Cal	Bf
La Paz (*lah pahz*), Ariz	Jn
Las Cruces, N. Mex	Rp
(*lahs kroo'ses*)	
Las Vegas, N. Mex	Sk
(*lahs vay'gahs*)	
Leadville (*led'vil*), Col	Rf
Le'hi, Utah	Md
Lo'gan, Utah	Mb
Long'mont, Col	Sd
Los Angeles, Cal	Fn
(*loce an'jẹh-lez*)	
Man'ti, Utah	Mf
Maripo'sa, Cal	Eh
Marysville, Cal	Cf
Mendocino, Cal	Ae
(*men-do-se'no*)	
Merced (*mẹr-sayd'*), Cal	Di
Mesilla, N. Mex	Rp
(*may-seel'yah*)	
Mineral City, Nev	Jf
Mohave City, Ariz	Jl
(*mo-hah'vay*)	
Monterey, Cal	Bj
(*mon-te-ray'*)	
Mo'ra, N. Mex	Sk
Mount Pleasant, Utah	Mf
Napa City (*nah'pạ*), Cal.	Bg
Nevada (*ne-vah'dạ*), Cal	Df
Oakland, Cal	Bh
Ogden, Utah	Mc
Oro'ville, Cal	Ce
Ouray', Col	Qh
Parowan, Utah	Lh
(*pay'ro-wahn*)	
Parrott, Col	Pi
Peral'ta, N. Mex	Rl
Petaluma, Cal	Bg
(*pet-ạ-loo'mạ*)	
Phœnix, Ariz	Lo
Pine Grove, Nev	Eg
Pine Valley, Utah	Ki
Pinos Altos, N. Mex	Po
(*pe'noce ahl'toce*)	
Pioche (*pe-o'chay*), Nev	Jh
Pla'cerville, Cal	Dg
Pleasant Grove, Utah	Md
Pres'cott, Ariz	Lm
Pro'vo, Utah	Me
Pueblo (*pweb'lo*), Col	Tg
Red Bluff, Cal	Bd
Redding, Cal	Bc
Redwood City, Cal	Bh
Re'no, Nev	Ec
Rockville, Utah	Li
Sacramento, Cal	Cg
Salt Creek, Utah	Me
Salt Lake City, Utah	Md
San Anto'nio, Cal	Cj
San Bernardino, Cal	Gn
(*sahn bĕr-nar-de'no*)	
San Buenaventura, Cal	Em
(*sahn bway-nah-ven-too'rah*)	
San Diego, Cal	Gp
(*sahn de-ay'go*)	
San Francisco, Cal	Bh
San José, Cal	Ci
(*sahn ho-say'*)	
San Luis (*san loo'is*), Col	Si
San Luis Obispo, Cal	Cl
(*san loo'is o-bis'po*)	
San Ra'fael, Cal	Bg
Santa Bar'bara, Cal	Dm
Santa Clara, Cal	Bh
Santa Cruz, Cal	Bi
(*san'tạ kroos*)	
Santa Fé (*fay*), N. Mex	Sk
Santa Rosa, Cal	Bg
Shasta, Cal	Bc
Silver City, N. Mex	Pp
Silver Peak, Nev	Gh
Silverton, Col	Qh
Socor'ro, N. Mex	Rm
Soledad (*sol-e-dad'*), Cal	Cj
Sono'ra, Cal	Dh
South Pueblo, Col	Tg
(*pweb'lo*)	
Spanish Fork, Utah	Me
Springville, Utah	Me
St. George, Utah	Ki
Stockton, Cal	Ch
St. Thomas, Nev	Jj
Susanville, Cal	Dd
Tooele (*too-el'e*), Utah	Ld
Toquerville, Utah	Ki
(*to'kẹr-vil*)	
Trinidad, Col	Ti
Truckee', Cal	De
Tubac (*too-bak'*), Ariz	Nq
Tucson (*too-sŏn'*), Ariz	Nq
Tuscaro'ra, Nev	Hc
Uki'ah, Cal	At
Unionville, Nev	Gd
Vallejo (*val-lay'ho*), Cal	Bg
Valverde, N. Mex	Rn
(*vahl-vĕr'day*)	
Virginia City, Nev	Ef
Visa'lia, Cal	Ej
Washoe City, Nev	Ef
(*wosh-o'*)	
Weaverville, Cal	Bc
West Las Animas, Col	Ug
(*lahs ahn'-e-mahs*)	
Wickenberg, Ariz	Ln
Willard, Utah	Lc
Wilmington, Cal	Fn
Winnemucca, Nev	Gc
Yreka (*e-re'kạ*), Cal	Bb
Yu'ma, Ariz	Jp

◆

Map of the British Isles.

PAGE 83.

Abbottsford, Scot	Jj
Aberaeron, Wa	It
(*ab-ẹr-ay'rọn*)	
Aberdeen', Scot	Ke
Aberyst'with, Wa	Is
Aboyne', Scot	Je
Alford (*awl'fọrd*), Scot	Je
Alnwick (*an'nik*), Eng	Lj
Appleby, Eng	Km
Ar'broath, Scot	Kg
Arklow, Ire	Fr
Armagh (*ar-mah'*), Ire	En
Athlone', Ire	Dp
Athy (*ạ-thi'*), Ire	Eq
Aughrim (*awg'rim*), Ire.	Cp
Ax'minster, Eng	Kx
Aylesbury, Eng	Mu
(*aylz'ber-e*)	
Ayr, Scot	Hj
Balbrig'gan, Ire	Fp
Ballina (*bal-e-nah'*), Ire	Bn
Ballinasloe', Ire	Cp
Ballyme'na, Ire	Fl
Ballyshan'non, Ire	Cm
Balmo'ral Castle, Scot	Jf
Banbury, Eng	Mt
Bandon, Ire	Bu
Banff (*bamf*), Scot	Kd
Bangor (*bang'ḡer*), Wa	Iq
Ban'nockburn, Scot	Ih
Bantry, Ire	Au
Barking, Eng	Qb
Barn staple, Eng	Iw
Barrow, Eng	Jn
Barton, Eng	No
Ba'singstoke, Eng	Mw
Bath, Eng	Kv
Bat'tersea, Eng	Pc
Beaumaris, Wa	Iq
(*bo-may'ris*)	
Bedford, Eng	Nt
Belfast', Ire	Fm
Berwick (*bĕr'rik*), Scot	Ki
Beverley, Eng	No
Bid'eford, Eng	Ix
Birkenhead, Eng	Jp
Birmingham, Eng	Ls
(*bir'ming-ạm*)	
Black'burn, Eng	Ko
Black'heath, Eng	Qe
Blackwall', Eng	Qb
Bolton (*bole'tọn*), Eng	Kp
Boston, Eng	Nq
Bosworth, Eng	Ms
Bow, Eng	Qb
Bowness (*bo-ness'*), Eng.	Jm
Boyle, Ire	Co
Bradford, Eng	Lo
Bray, Ire	Fq
Brechin (*breᴋ'in*), Scot	Kf
Breck'nock, Wa	Ju
Brentford, Eng	Ne
Bridge'water, Eng	Jw
Bridlington, Eng	Nn
(*bur'ling-tọn*)	
Brighton, Eng	Nx
Bristol, Eng	Kv
Brixton, Eng	Pc
Bromley (*brum'le*), Eng	Qd
Buckingham, Eng	Mt
(*buk'ing-ạm*)	
Burnley, Eng	Ko
Burton-on-Trent, Eng	Lr
Bury St. Edmunds, Eng	Ps
Cahir (*kah'hẹr*), Ire	Cs
Cambridge (*kāme'-*), Eng.	Ot
Campbelltown, Scot	Gj
(*kam'ẹl-town*)	
Canterbury, Eng	Pv
Car'diff, Wa	Jv
Car'digan, Wa	Ht
Carlisle (*kar-lile'*), Eng	Jl
Car'low, Ire	Er
Carmar'then, Wa	Hu
Carnar'von, Wa	Iq
Carrickfer'gus, Ire	Gl
Carrickmacross', Ire	Eo
Carrick-on-Shannon, Ire.	Do
Carrick-on-Suir, Ire	Ds
(*shure*)	
Cash'el, Ire	Ds
Castlebar, Ire	Bo
(*kas-sẹl-bar'*)	
Castle Bla'ney, Ire	En
Cav'an, Ire	Do
Chatham (*chat'ạm*), Eng	Ov
Chelmsford, Eng	Ou
(*chemz'fọrd*)	
Cheltenham, Eng	Lu
(*chelt'nạm*)	
Chepstow, Eng	Kv
Chester, Eng	Jq
Chesterfield, Eng	Lq
Chichester, Eng	Nx
(*chitch'ẹs-tẹr*)	
Clapham (*klap'ạm*), Eng	Pc
Clonmel', Ire	Ds
Colchester, Eng	Pu
(*kole'chẹs-tẹr*)	
Colcraine, Ire	Fk
(*kole-rayn'*)	
Cookstown, Ire	Em
Cork, Ire	Ct
Cowes (*kouz*), Eng	Mx
Crewe, Eng	Kq
Crieff (*kreef*), Scot	Ig
Crom'arty, Scot	Id
Crook'haven, Ire	Av
Croydon, Eng	Nv, Pe
Cullo'den, Scot	Id
Cupar (*koo'pạr*), Scot	Jh
Dalkeith', Scot	Ji
Darlington, Eng	Lm
Dartmouth, Eng	Jz
(*dart'muth*)	
Deal, Eng	Qw
Denbigh (*den'be*), Wa	Jq
Derby, Eng	Lr
(*der'be* or *dar'be*)	
Devi'zes, Eng	Lv
Dev'onport, Eng	Iy
Dingle, Ire	At
Ding'wall, Scot	Hd
Dolgelly (*dol-geth'le*), Wa	Ir
Donc'aster, Eng	Mp
Donegal, Ire	Dl
(*don-e-gawl'*)	
Dor'chester, Eng	Kx
Dornoch (*dor'noᴋ*), Scot	Ic
Douglas (*dug'lạs*), Eng	Hn
Dover, Eng	Qw
Downpat'rick, Ire	Gn
Drogheda, Ire	Fo
(*drŏh'he-dạ*)	
Dublin, Ire	Fp
Dudley, Eng	Ls
Dulwich (*dul'ij*), Eng	Pc
Dumbar ton, Scot	Hi
Dumfries, Scot	Jk
(*dum-freece'*)	
Dunbar', Scot	Ki
Dundalk, Ire	Fo
(*dun-dawk'*)	
Dundee', Scot	Jg
Dunfermline, Scot	Jh
(*dum-fer'lin*)	
Dungan'non, Ire	Em
Dungar'van, Ire	Dt
Dunkeld (*dun-kel'*), Scot	Ig
Durham (*dur'ạm*), Eng	Ml
Durness, Scot	Ha
Ealing, Eng	Nb
Edgeware, Eng	Oa
Edinburgh, Scot	Ji
(*ed'in-bur-rŭh*)	
Edmondton, Eng	Pa
Elgin (*el'ḡin*), Scot	Jd
Elsher, Eng	Ne
E'ly, Eng	Os
Enfield, Eng	Pa
Ennis, Ire	Br
Enniscor'thy, Ire	Es
Enniskil'len, Ire	Dm
Epsom, Eng	Oe
E'ton, Eng	Nv
Evesham, Eng	Lt
(*eevz'ạm*)	
Exeter, Eng	Jx
Eyemouth, Scot	Ki
(*i'muth*)	
Falkirk (*faw-kirk'*), Scot.	Ii
Falmouth, Eng	Gz
(*fal'muth*)	
Fermoy', Ire	Ct
Finchley, Eng	Oa
Fleetwood, Eng	Jo
Folke'stone, Eng	Pw
For'far, Scot	Jg
Forres (*fŏr'-rĕs*), Scot	Id
Foynes, Ire	Br
Fraserburg, Scot	Kd
(*fray'zẹr-bur-rŭh*)	
Frome, Eng	Lw
Gainesborough, Eng	Mp
Gairloch (*gayr'lọᴋ*), Scot.	Gc
Galway (*gawl'way*), Ire	Bp
Gates'head, Eng	Ll
Girvan (*ḡeer'vạn*), Scot	Hk
Glasgow, Scot	Ii
Glastonbury, Eng	Kw
Glossop, Eng	Lp
Gloucester (*glos'tẹr*), Eng.	Lu
Goole, Eng	Mo
Gosport, Eng	Mx
Grantham, Eng	Mr
(*grant'ạm*)	
Gravesend, Eng	Ov
(*grayvz-end'*)	
Great Grimsby, Eng	Np
Great Marlow, Eng	Nv
Greenock, Scot	Hi
Greenwich, Eng	Qc
(*grin'ij*)	
Gretna Green, Scot	Jl
Guilford, Eng	Nw
(*ḡil'fọrd*)	
Hackney, Eng	Pb
Haddington, Scot	Ji
Halifax, Eng	Lo
Hamilton, Scot	Ii
Hammersmith. Eng	Oc
Hampstead, Eng	Ob
Hampton Court, Eng	Nd
Hanley, Eng	Kq
Hanwell, Eng	Nb
Harleck, Wa	Ir
Harrow, Eng	Na
Harwich (*hăr'rij*), Eng	Pt
Hastings, Eng	Px
Hawick (*haw'wik*), Scot	Jj
Hereford, Eng	Kt
(*hĕr'e-fŏrd*)	
Hertford (*har'fọrd*), Eng.	Nu
Highgate, Eng	Pa
Hitchin, Eng	Nu
Holloway, Eng	Pa
Holyhead, Wa	Hq
(*hol'e-hed*)	
Holywell (*hol'e-wel*), Wa	Jq
Honiton, Eng	Jx
(*hun'e-tọn*)	
Hounslow, Eng	Nc
(*hounz'lo*)	
Hull, Eng	No
Huntingdon, Eng	Ns
Huntley, Scot	Jd
Invera'ry, Scot	Hh
Inverness', Scot	Id
Invers, Scot	Hb
Inveru'ry, Scot	Ke
Ips'wich, Eng	Pt
Irvine (*ir'vin*), Scot	Hj
Jedburgh, Scot	Kj
(*jed'bur-rŭh*)	
Kelso, Scot	Kj
Kendal, Eng	Kn
Kensington, Eng	Ob
Kidderminster, Eng	Ks
Kildare', Ire	Eq
Kilken'ny, Ire	Er
Killala, Ire	Bn
(*kil-lạ-lah'*)	
Killaloe, Ire	Cr
(*kil-lạ-loo'*)	
Killar'ney, Ire	At
Kilmar'nock, Scot	Hj
Kilrush', Ire	Ar
King's Lynn, Eng	Or
Kingston, Eng	Od
Kingstown, Ire	Fq
Kinsale', Ire	Cu
Kirkcaldy, Scot	Jh
(*kirk-kawl'de*)	
Kirkcudbright, Scot	Il
(*kir-koo'bre*)	
Kirkwall', Scot	Af

Lancaster, Eng..........Ko
Launceston, Eng.........Hy
(*lahns'tọn*)
Leamington, Eng.........Lt
(*lem'ing-tọn*)
Leeds, Eng..............Lo
Leicester (*les'tẹr*), Eng...Ms
Leith (*leeth*), Scot........Ji
Leominster, Eng.........Kt
(*lem'-stẹr*)
Lerwick (*lĕr'rik*), Scot....Ce
Lewes (*loo'is*), Eng......Ox
Leyton (*lay'tọn*), Eng....Qa
Lif'ford, Ire.............Dl
Limerick, Ire.............Cr
Lincoln, Eng.............Nq
Liskeard (*lis-kard'*), Eng.Hy
Liverpool, Eng...........Jp
Llanelly (*lah-neth'le*), Wa.Iu
London, Eng........Ov, Pb
Londonder'ry, Ire.......Ek
Longford, Ire............Do
Longtown, Eng..........Jl
Loughrea (*lŏh-ray'*), Ire..Cq
Louth, Eng..............Np
Low'estoft, Eng.........Qs
Ludlow (*lud'lo*), Eng....Ks
Lu'ton, Eng.............Nu
Mac'clesfield, Eng.......Lq
Maidstone, Eng..........Ov
(*mayd'stọn*)
Malden (*mawl'dẹn*), Eng..Oc
Mallow, Ire..............Bt
Malmesbury, Eng.......Lv
(*mahmz'bĕr-e*)
Manchester, Eng.........Kp
Mansfield, Eng..........Mq
Margate, Eng............Qv
Marston Moor, Eng.....Mn
Maryborough, Ire.......Eq
Maryport, Eng...........Jl
May'nooth, Ire..........Ep
Melrose', Scot...........Kj
Merthyr Tydfil, Wa.....Ju
Middlesborough, Eng...Mm
(*mid'dẹlz-b'ruh*)
Milford, Wa.............Hu
Monaghan, Ire..........En
(*mon'ạ-hạn*)
Monmouth, Eng.........Ku
(*mon'muth*)
Montgomery, Wa........Js
(*mọnt-gum'ẹr-e*)
Montrose, Scot...........Kf
(*mọn-troze'*)
Morpeth, Eng...........Lk
Mo'ville, Ire.............Ek
Mullingar', Ire..........Dp
Nairn (*nayrn*), Scot......Id
Nav'an, Ire..............Ep
Nenagh (*nay'nạ*), Ire....Cr
Newark, Eng............Mq
Newcastle, Eng.........Lk
(*nu-kas'sẹl*)
Newcastle, Ire...........Bs
(*nu-kas'sẹl*)
Newport, Eng............Jv
Newport, Ire.............Bo
Newport, Isle of Wight..Mx
New Radnor, Wa........Jt
New Ross, Ire............Es
Newry, Ire...............Fn
Newton Ards, Ire........Gm
Newton Stewart, Scot....Hl
Northallerton, Eng......Ln
Northampton, Eng.......Mt
North Berwick, Scot....Kh
(*bĕr'rik*)
Norwich (*nor'rij*), Eng..Pr
Norwood, Eng...........Pd
Nottingham, Eng........Mr
O'ban, Scot..............Gg
Oldham (*old'ạm*), Eng...Lp
Omagh (*o-mah'*), Ire....Em
Oxford, Eng.............Mu
Paisley (*payz'le*), Scot....Hi
Parsonstown, Ire........Dq
Pembroke, Wa...........Hv
Pen'rith, Eng............Km
(or *pe'rith*)
Penzance', Eng..........Gz
Perth, Scot..............Jg
Peterborough, Eng......Ns
Peterhead, Scot.........Ld
Plymouth, Eng..........Iy
(*plim'uth*)
Pontefract, Eng.........Mp
(*pom'fret*)
Poole, Eng..............Lx
Port Patrick, Scot........Gl
Port Rush, Ire...........Fk
Portsmouth, Eng........Mx
(*ports'muth*)
Port'soy, Scot............Jd
Preston, Eng............Ko
Putney, Eng.............Oc
Queenstown, Ire.........Cu
Ramsgate, Eng..........Qv
Reading (*red'ing*), Eng..Mv
Red'ruth, Eng...........Gz
Rip'on, Eng.............Ln
Rochdale, Eng..........Lp
(*rotch'dẹl*)
Roscom'mon, Ire........Cp
Rugby, Eng.............Ms
Ryde, Eng..............Mx
Salford, Eng............Kp
(*sawl'fọrd*)
Salisbury, Eng..........Lw
(*sawlz'ber-e*)
Scarborough, Eng.......Nn
(*skar'b'ruh*)
Selby, Eng.............Mo
Selkirk, Scot.............Jj
Sheerness', Eng.........Pv
Sheffield, Eng...........Lp
Shrewsbury, Eng........Kr
Skibbereen', Ire.........Bv
Sli'go, Ire...............Cn
Southampton, Eng.......Lx
(*suth-hamp'tọn*)
Southport, Eng..........Jp
South Shields, Eng......Lk
Stafford, Eng............Kr
St. Albans, Eng.........Nu
(*awl'bạnz*)
Stamford, Eng..........Nr
St. Andrew's, Scot......Kh
St. David's, Wa........Gu
St. Hel'ier, I. of Jersey...Lz
Stirling, Scot............Ih
St. Ives, Eng............Gz
Stockport, Eng..........Kp
Stockton, Eng..........Lm
Stoke-on-Trent, Eng....Kq
Stoneha'ven, Scot.......Kf
Stor'noway, Scot........Fb
St. Pierre, I. of Guernsey.Kz
(*peer*)
Strabane', Ire............Dl
Stranraer, Scot...........Hl
(*stran-rar'*)
Stratford, Eng..........Qb
Stratford-on-A'von, Eng.Lt
Strome, Scot............Ge
Stroud, Eng. ....Ku
Sudbury, Eng............Pt
Sunderland, Eng.........Ll
Swansea (*swon'se*), Wa....Iv
Sydenham, Eng.........Qd
(*sid'ẹn-ạm*)
Tain (*tayn*), Scot.........Ic
Tarbert, Ire.............Br
Taunton (*tawn'tọn*), Eng.Jw
Tav'istock, Eng..........Iy
Teignmouth, Eng........Jy
(*tayn'muth*)
Tewkesbury, Eng........Lt
Thur'so, Scot............Ia
Tippera'ry, Ire...........Cs
Tiv'erton, Eng ....Jx
Torquay (*tor-ke'*), Eng...Jy
Tot'ness, Eng............Iv
Tottenham, Eng.........Pa
Tralee (*trah-le'*), Ire.....As
Tred'egar, Eng..........Ju
Trim, Ire...............Ep
Trowbridge, Eng.......Lw
(*tro'brij*)
Tru'ro, Eng.............Gz
Tu'am, Ire..............Cp
Tullamore', Ire..........Dq
Tunbridge Wells, Eng. Ow
Twickenham, Eng.......Nc
Tynemouth (*-muth*), Eng.Lk
Wal'sall, Eng............Ls
Ware, Eng..............Ou
Warwick (*wor'rik*), Eng..Lt
Waterford, Ire...........Et
Watford, Eng............Na
Wells, Eng..............Kw
Wells, Eng..............Pq
Welshpool, Wa..........Jr
Westport, Ire.... ......Bo
Wexford, Ire............Et
Weymouth, Eng.........Ky
(*way'muth*)
Whitby, Eng............Mm
Whiteha'ven, Eng.......Im
Wick, Scot..............Ja
Wicklow, Ire............Fr
Wigton, Scot............Hl
Wim'bledon, Eng.......Od
Winchester, Eng........Mw
Windsor (*win'zọr*), Eng..Nv
Wis'beach, Eng.........Or
Wolverhamp'ton, Eng...Ks
Woodford, Eng..........Qa
Woodstock, Eng........Mu
Woolwich, Eng..........Qc
(*wŏŏl'itch*)
Worcester, Eng..........Kt
(*wŏŏs'tẹr*)
Wrex'ham, Wa..........Jq
Yarmouth, Eng..........Qr
(*yar'muth*)
Yeovil (*yo'vil*), Eng.....Kx
York, Eng..............Mo
Youghal (*yŏh'hil*), Ire....Ct

Map of the German Empire, Holland, and Belgium.

PAGE 86.

Bel. = Belgium.
Ger. = German Empire.
Hol. = Holland.

Aix-la-Chapelle, Ger....Dm
(*ayks-lah-shah-pel'*)
Alkmaar, Hol...........Bh
(*alk-mahr'*)
Altenburg, Ger.........Km
(*ahl'tẹn-bŏŏrg*)
Altona (*ahl'tọ-nah*), Ger.Hg
Amberg (*ahm'bĕrg*) Ger..Kp
Amsterdam, Hol.......Bi
Anspach (*ahns'pah*ᴋ), Ger.Iq
Antwerp, Bel.............Bl
Arlon (*ar-lō*ɴ'), Bel......Co
Arn'hem, Hol...........Dj
Arolsen (*ah'rol-sẹn*), Ger.Gl
Aschaffenburg, Ger......Go
(*ạ-shaf'fẹn-burg*)
Augsburg, Ger..... .....Is
Baden (*bah'dẹn*), Ger.....Fr
Bam'berg, Ger...........Io
Barmen, Ger.............El
Bautzen (*bout'sẹn*), Ger...Nl
Bayreuth (*bi'ruth*), Ger..Jo
Ber'lin, Ger..........Li, Qs
Bern'burg, Ger..........Jk
Beuthen (*boy'tẹn*), Ger...Sn
Blenheim (*blen'im*), Ger..Ir
Bonn, Ger..............Em
Brandenburg, Ger........Ki
Braunsberg, Ger.........Td
(*browns'bĕrg*)
Breda (*bray'dah*), Hol...Bk
Brem'en, Ger...........Gh
Bremerhaven, Ger.......Gf
(*bray'mẹr-hah-fẹn*)
Bres'lau, Ger............Ql
Brieg (*bree*ᴋ), Ger..... Qm
Bromberg, Ger..........Rg
(*brom'bĕrg*)
Bruges (*bru'jiz*), Bel.....Ak
Brunswick, Ger..........Ij
Brussels, Bel.............Al
Bückeburg, Ger..........Gj
(*bük'kẹh-bŏŏrg*)
Cammin, Ger............Nf
(*kahm-meen'*)
Camperdown', Hol.......Bh
Carlsruhe, Ger...........Fq
(*karls'roo*)
Cassel (*kas'sẹl*), Ger......Hl
Celle (*tsel'lẹh*), Ger.......Hi
Charlottenburg, Ger......Ps
(*shar-lot'tẹn-bŏŏrg*)
Chemnitz, Ger..........Lm
(ᴋ*em'nits*)
Cleves, Ger.............Dj
Cob'lentz, Ger..........En
Co'burg, Ger............Jn
Col'berg, Ger............Oe
Col'mar, Ger........ ...Es
Cologne (*ko-lone'*), Ger..Em
Cöslin (*kös-leen'*), Ger....Pc
Courtray', Bel...........Al
Crefeld (*kray'felt*), Ger...Dl
Cuxha'ven, Ger..........Gf
Dant'zic, Ger............Rd
Darmstadt, Ger..........Go
(*darm'staht*)
Delft, Hol...............Bj
Des'sau, Ger............Kk
Det'mold, Ger...........Gj
Dettingen, Ger..........Go
(*det'ting-ẹn*)
Dort, Hol............ ..Bj
Dortmund, Ger..........Ek
(*dort'mŏŏnt*)
Dresden (*drez'dẹn*), Ger..Ml
Duisburg, Ger..........Dk
(*doo'is-bŏŏrg*)
Dus'seldorf, Ger.........Dl
Eckmühl (*ek'mule*), Ger..Kr
Ehrenbreitstein, Ger.....En
(*ay-rẹn-brite'stine*)
Eisenach, Ger...........Im
(*i'zẹn-ah*ᴋ)
Eisleben, Ger............Jk
(*ice'lay-bẹn*)
Elberfeld (*el'bẹr-felt*), Ger.El
Elbing, Ger..............Se
Emden, Ger.............Eg
Ems, Ger...............Fn
Erfurt (*ĕr'fŏŏrt*), Ger....Jm
Essen, Ger..............Ek
Esslingen, Ger...........Gr
(*es'ling-ẹn*)
Eylau (*i'lou*), Ger.......Ud
Flensburg, Ger..........Hd
(*flens'bŏŏrg*)
Frankfort-on-the-Main,
Ger...................Fn
Frankfort-on-the-O'der,
Ger...................Ni
Freiberg (*fri'bĕrg*), Ger..Mn
Freiburg (*fri'bŏŏrg*), Ger.Es
Friedland, Ger..........Ud
(*freed'lạnd*)
Friedrichshafen, Ger.....Gt
(*freed'ri*ᴋ*s-hah-fẹn*)
Fürth (*fürt*), Ger........Ip
Gera (*gay'rah*), Ger.....Km
Ghent (*ḡent*), Bel........Al
Giessen (*ḡees'sẹn*), Ger...Gm
Gladbach, Ger...........Dl
(*glahd'bah*ᴋ)
Glauchau, Ger..........Km
(*glou'*ᴋ*ou*)
Gleiwitz (*gli'wits*), Ger...Sn
Glogau (*glo'gou*), Ger....Pk
Glückstadt, Ger.........Hf
(*glük'staht*)
Görlitz (*gör'lits*), Ger....Nl
Gotha (*go'tah*), Ger......Im
Göttingen, Ger..........Hk
(*ḡet'ting-ẹn*)
Greifswald, Ger..........Le
(*grīfs'wahld*)
Greiz (*grits*), Ger.......Km
Groningen, Hol..........Eg
(*gron'ing-ẹn*)
Guben (*goo'bẹn*), Ger.....Nj
Haarlem (*har'lẹm*), Hol...Bi
Hagen (*hah'ḡẹn*), Ger.....El
Hague (*hayg*), The, Hol..Bi
Halberstadt, Ger.........Jj
(*hahl'bẹr-staht*)
Halle (*hahl'lẹh*), Ger.....Kk
Hamburg, Ger...........Ig
Hanau (*hah'now*), Ger...Gn
Hanover, Ger...........Hi
Harburg (*har'bŏŏrg*), Ger.Hg
Harlingen, Hol..........Cg
(*har'ling-ẹn*)
Hasselt (*hahs'sẹlt*), Bel. ..Cl
Heidelberg, Ger..........Gp
(*hi'dẹl-bĕrg*)
Heilbronn, Ger..........Gq
(*hile'bronn*)
Helder, Hol.............Bh
Hildesheim, Ger.........Hj
(*hil'dẹs-hime*)
Hof, Ger................Kn
Hohenlind'en, Ger.......Ks
Huy (*hoy*), Bel..........Bm
Ingolstadt, Ger..........Jr
(*ing'ol-staht*)
Insterburg, Ger..........Ve
(*in'stẹr-bŏŏrg*)
Jastrow (*yahs'tror*), Ger. Pg
Jen'a, Ger..............Jm
Johannisburg, Ger.......Vf
(*yo-hahn'nis-bŏŏrg*)
Kaiserslautern, Ger......Ep
(*ki'zẹrs-lou-tẹrn*)
Kehl (*kayl*), Ger.........Er
Kempten, Ger...........Ht
Kiel (*keel*), Ger..........Ie
Kissingen, Ger..........Hn
(*kis'sing-ẹn*)
Königsberg, Ger.........Tc
(*kön'igz-bĕrg*)
Köpenick, Ger...........St
(*kö'pẹh-nik*)
Kottbus ((*kott'boos*), Ger.Nk
Landau (*lahn'dou*), Ger...Fq
Landsberg, Ger.........Oh
(*landz'bẹrg*)
Landshut, Ger...........Ks
(*landz'hoot*)
Lauenburg, Ger......Ig, Qd
(*lou'ẹn-burg*)
Leeuwarden, Hol........Dg
(*lā'war-dẹn*)
Leipsic (*lipe'sik*), Ger....Kl
Leyden (*li'dẹn*), Hol.....Bi
Liége (*leej*), Bel.........Cm
Liegnitz (*leeg'nits*), Ger...Pl
Lindau (*lin'dou*), Ger....Hu
Lis'sa, Ger..............Pl
Louvain', Bel............Bl
Lü'beck, Ger............If
Lüneburg, Ger..........Ig
(*lü'nẹh-burg*)
Lutzen (*loot'sẹn*), Ger.....Kl
Lux'emburg, Hol........Co
Maestricht, Bel..........Cm
(*mahs'tri*ᴋ*t*)
Mag'deburg, Ger.........Jj
Mannheim, Ger..........Fp
(*mahn'hime*)
Marburg, Ger...........Gm
Mayence', Ger...........Fo
Mechlin (*mek'lin*), Bel...Bl
Meerane, Ger...........Km
(*may'rah-nẹh*)
Meiningen, Ger..........In
(*mi'ning-ẹn*)
Meissen (*mice'sẹn*), Ger...Ll
Mem'el, Ger............Ua
Mer'seburg, Ger.........Kl
Metz, Ger...............Cq
Middelburg, Hol........Ak
Minden, Ger.............Gj
Mons (*mō*ɴ*ss*), Bel......Am
Mühlhausen, Ger........Et
(*mül-how'zẹn*)
Munich (*mu'nik*), Ger....Js
Münster (*mun'stẹr*), Ger..Fj
Na'mur, Bel............Bm
Neustadt (*noy'staht*), Ger..Ie
Neu-Strelitz, Ger.......Lg
(*noy stray'lits*)
Nimeguen, Hol..........Cj
(*ne-may'ḡẹn*)
Nordhausen, Ger.........Ik
(*nort-how'zẹn*)
Nu'remberg, Ger.........Jp
Oels (*öls*), Ger...........Ql
Offenbach, Ger..........Go
(*of'fẹn-bah*ᴋ)
Ol'denburg, Ger.........Fh
Oppeln, Ger............Rm
Osnabrück, Ger..........Fi
(*os'nạ-brük*)
Ostend', Bel.............Ak
Passau (*pahs'sou*), Ger...Mr
Pforzheim, Ger..........Gq
(*pforts'hime*)
Pillau (*pil'lou*), Ger.....Td
Plauen (*plou'ẹn*), Ger...Kn
Potsdam, Ger............Li
Posen (*po'zẹn*), Ger......Qi
Prenzlau, Ger...........Mg
(*prents'lou*)
Rastadt (*rahs'taht*), Ger..Fq
Ratibor (*rah'te-bor*), Ger..So
Rat'isbon, Ger...........Kq
Reichenbach, Ger.......Pm
(*ri'*ᴋ*ẹn-bah*ᴋ)
Riesa (*re'zah*), Ger.......Ll
Ros'tock, Ger...........Ke
Rot'terdam, Hol.........Bj
Rudolstadt, Ger.........Jm
(*roo'dol-staht*)
Saarbrück , Ger.........Dp
(*sahr'brük*)
Schiedam, Hol...........Bj
(*s*ᴋ*e-dahm'*)
Schleiz (*shlīts*), Ger......Kn
Schleswig, Ger..........Hd
(*shles'wig*)
Schmalkalden, Ger......Im
(*shmahl'kahl-dẹn*)
Schöneberg, Ger.........Qs
(*shö'nẹh-bĕrg*)
Schweidnitz, Ger. ......Pm
(*shwīd'nits*)
Schwerin, Ger...........Jf
(*shway-reen'*)
Sondershausen, Ger.......Il
(*son'dẹrz-how-zẹn*)
Spandau, Ger........Pr, Li
(*spahn'dou*)
Spires, Ger..............Fp
Stahnsdorf, Ger.........Pu
Stargard (*star'gart*), Ger.Ng
Steglitz, Ger.............Qt
Stendal (*sten'dahl*), Ger...Ji
Stettin (*stet-teen'*), Ger...Ng
St. Nicolas, Bel..........Al
Stolpe (*stol'pẹh*), Ger.....Qd
Stralsund, Ger...........Le
(*strahl'soond*)
Strasburg, Ger...........Er
Stutt'gart, Ger...........Gr
Tegel (*tay'ḡẹl*), Ger.......Pr
Teltow (*tel'tov*), Ger......Pt
Thionville, Ger..........Cp
(*te-ō*ɴ*-veel'*)
Thorn (*torn*), Ger........Sh
Tilburg, Hol.............Bk
Tilsit, Ger...............Vb
Tönning, Ger............Ge
Tournay', Bel...........Am
Treptow (*trep'tou*), Ger...Rs
Treves, Ger.............Do
Tübingen, Ger ....Gr
(*tü'bing-ẹn*)
Ulm, Ger...............Hs
Ulzen (*oolt'sẹn*), Ger......Ih
Utrecht (*u'trekt*), Hol....Ci
Venlo', Hol.............Dk
Verviers, Bel...........Cm
(*vĕr-ve-ay'*)
Waterloo', Bel..........Am
Weimar (*wi'mar*), Ger...Jm
Wesel ((*way'zẹl*), Ger....Dk
Wiesbaden, Ger.........Fo
(*wees'bah-dẹn*)
Wilhelmshaven, Ger.....Ff
(*wil'helms-hah-fẹn*)
Wis'mar, Ger............Jf
Wit'tenberg, Ger........Lk
Wolf'enbüttel, Ger........Ij
Worms, Ger.............Fp
Wörth (*wört*), Ger.......Eq
Würzburg, Ger..........Ho
(*wurts'burg*)
Ypres (*ee'p'r*), Bel.......Al
Zittau (*tsit'tou*), Ger....Nm
Zwickau (*tswik'ou*), Ger.Km
Zwolle (*zwol'lẹh*), Hol....Di

Map of Southern and part of Central Europe.

PAGE 90.

Aus. = Austro-Hungary.
Bul. = Bulgaria.
Fr. = France.
Gr. = Greece.
It. = Italy.
Monte. = Montenegro.
Por. = Portugal.
Rou. = Roumania.
Ser. = Servia.
Sp. = Spain.
Swz. = Switzerland.
Tur. = Turkey.

Adrianople, Tur.........Uj
(*ad-re-ạn-o'p'l*)
Agincourt, Fr...........Hc
(*ah-zhah*ɴ*-koor'*)
Agram (*og'rom*), Aus....Og
Aix (*ayks*), Fr............Ji
Ajaccio (*ah-yaht'cho*), Fr.Kk
Albacete, Sp............Em
(*ahl-bah-thay'tay*)
Alicante, Sp............Fn
(*ah-le-kahn'tay*)
Almaden, Sp............Cm
(*ahl-mah-den'*)
Almeria, Sp.............En
(*ahl-may-re'ah*)
Amiens (*am'e-ẹnz*), Fr...Hd
Ancona (*ahn-ko'nah*), It..Ni
Andorra, Sp.............Gj
(*ahn-dor'rah*)
Andria (*ahn'dre-ah*), It..Ok
An'gers, Fr.............Ge
Angoulême, Fr..........Gg
(*o*ɴ*-goo-lame'*)
Arad (*ŏr'ŏd*), Aus.......Rg
Arta (*ar'tah*), Gr........Rm
Asnières (*ahs-ne-ayr'*), Fr.Cs
Ath'ens, Gr.............Tm
Avignon, Fr..............Ii
(*ah-veen-yō*ɴ*'*)
Badajos (*bad-ạ-hoce'*), Sp.Bl
Barcelona, Sp...........Hk
(*bar-se-lo'nạ*)
Bari (*bah're*), It.........Pk
Basle (*bahl*), Swz........Kf
Bastia (*bahs-te'ah*), Fr....Kj
Bayonne (*bah-yon'*), Fr...Fi
Beja (*bay'zhah*), Por....Bm
Belgrade', Ser...........Qb
Benevento, It............Ok
(*ben-ay-ven'to*)
Berat (*bĕr-aht'*), Tur.....Rk
Berlad (*bĕr-laht'*), Rou...Uf
Berne (*bern*), Swz........Kf
Besançon, Fr............Jf
(*bẹ-zo*ɴ*-sō*ɴ)
Béziers (*bay-ze-ay'*), Fr..Hi
Bilbao (*bil-bah'o*), Sp.....Ei
Blois (*blwah*), Fr........He
Boissy (*bwah-se'*), Fr....Ev
Bologna (*bo-lone'yah*), It.Mi
Bordeaux (*bor-do'*), Fr...Fh
Bosna-Serai, Aus....... Qi
(*bos'nah sẹ-ri'*)
Botosani, Rou..........Td
(*bo-to-shah'ne*)
Boulogne (*boo-lone'*), Fr..Hc
Bourges (*boorzh*), Fr.....Hf
Braga (*brah'gah*), Por....Bj
Bragança, Por...........Cj
(*brah-gahn'sah*)
Braila (*brah-e'lah*), Rou..Ug
Brescia (*bresh-e'ạ*), It....Lh
Brest, Fr................Ed
Brie (*bree*), Fr...........Et
Brindisi (*brin'de-se*), It...Pl
Bro'dy, Aus.............Sc
Brünn, Aus.............Od
Bu'charest, Rou.........Tg
Bu'da-Pesth (*pest*), Aus..Qf
Budweis, Aus...........Nd
(*bŏŏd'wice*)

Burgas (*boor-gahs'*), Tur. Ui
Burgos (*boor'goce*), Sp....Dj
Caceres (*kah'thay-rĕs*), Sp. Cl
Ca'diz, Sp..............Bn
Caen (*koɴ*), Fr..........Gd
Cagliari (*kahl'yah-re*), It. Km
Calais (*kal'is*), Fr........Hc
Candia, Tur.............Up
Cap'ua, It..............Nk
Cartage'na, Sp..........En
Castellon, Sp...........Fl
(*kahs-tel-yone'*)
Catania, It.............Oo
(*kah-tah'ne-ah*)
Catanzaro, It...........Pm
(*kah-tahn-zah'ro*)
Cettigne, Monte.........Qj
(*chet-teen'yay*)
Chalons (*shah-lōɴ'*), Fr...Id
Champigny, Fr.........Eu
(*shoɴ-peen-ye'*)
Charenton, Fr..........Dt
(*shah-roɴ-tōɴ'*)
Chartres (*shart'r*), Fr....He
Cherbourg, Fr..........Fd
(*sher'burg*)
Choisy (*shwah-ze'*), Fr...Du
Ciudad Real, Sp........Dm
(*the-oo-dahd' ray-ahl'*)
Ciudad Rodrigo, Sp......Ck
(*the-oo-dahd' ro-dre'go*)
Civita Vecchia, It.......Mk
(*che've-tah vek'ke-ah*)
Clermont, Fr...........Hg
(*klĕr-mōɴ'*)
Coimbra, Por...........Bk
(*ko-eem'brah*)
Co'morn, Aus...........Pe
Constantino'ple, Tur. Lu, Wj
Cor'dova, Sp...........Cm
Corfu (*kor-foo'*), Gr......Rl
Corun'na, Sp...........Bh
Cosenza (*ko-sen'zah*), It..Pm
Cracow (*kray'ko*), Aus...Qc
Cres'sy, Fr.............Hc
Cuenca (*kwen'kah*), Sp...El
Czernowitz, Aus.........Td
(*cher'no-vits*)
Debreczin, Aus..........Rc
(*day-bret'sin*)

Dieppe (*de-ep'*), Fr......Hc
Dijon (*de-zhōɴ'*), Fr......If
Douai (*doo-ay'*), Fr.......Ic
Dulcigno, Monte........Qk
(*dool-cheen'yo*)
Dun'kirk, Fr............Hb
Durazzo, Tur...........Qk
(*doo-raht'so*)
Ecija (*ay'the-hah*), Sp....Cn
Elvas (*el'vahs*), Por......Bl
Eszek (*es'sek*), Aus.......Pg
Evora (*ev'o-rah*), Por.....Bl
Faro (*fah'ro*), Por.......An
Fermo (*fer'mo*), It.......Nj
Ferrol (*fĕr-role'*), Sp....Bh
Fiume (*fyoo'may*), Aus..Nh
Florence, It............Mi
Foggia (*fod'jah*), It......Ok
Fontenay, Fr............Et
(*fōɴt-nay'*)
Galata, Tur.............Mu
(*gah'lah-tah*)
Galatz (*gah'lahts*), Rou...Uf
Gallipoli, Tur...........Uk
(*gahl-lip'o-le*)
Gene'va, Swz............Jg
Gen'oa, It..............Ki
Gibraltar (*-brawl'-*), Sp..Co
Granada, Sp............Dn
(*gra̭-nah'dah*)
Grätz (*grets*), Aus.......Of
Grenoble (*grḙn-ōb'l'*), Fr..Jh
Grosswardein, Aus......Rf
(*groce-war'dine*)
Havre (*hahv'r*), Fr......Gd
Hermannstadt, Aus......Sg
(*hĕr'mahn-staht*)
Innspruck, Aus.........Mf
(*ins'prook*)
Jaen (*hah-en'*), Sp.......Dn
Janina (*yahn'e-nah*), Tur. Rl
Jassy (*yahs'se*), Rou......Ue
Jouy (*zhwe*), Fr.........Bu
Kaschau (*kah'shou*), Aus. Qd
Kecskemet, Aus.........Qf
(*kech-kem-ayt'*)
Klausenburg, Aus.......Sf
(*klaw'zḙn-burg*)
Kron'stadt (*-staht*), Aus..Tg
Larissa (*lah-ris'sah*), Tur. Sl

La Rochelle, Fr..........Fg
(*lah ro-shel'*)
Lausanne (*lo-zahn'*), Swz. Jg
Laval (*lah-vahl'*), Fr.....Ge
Laybach (*li'bahᴋ*), Aus..Ng
Leg'horn, It............Li
Le Mans (*lḙh moɴ'*), Fr..Ge
Lem'berg, Aus..........Sc
Le'on, Sp..............Ci
Lerida (*lĕr'e-dah*), Sp....Gk
Lille (*leel*), Fr..........Ic
Limoges (*le-mōzh'*), Fr...Gg
Linz (*lints*), Aus........Ne
Lisbon (*liz'bo̭n*), Por.....Al
Lodi (*lo'de*), It..........Lh
Logroño (*lo-grone'yo*), Sp. Ej
Loja (*lo'hah*), Sp........Cn
Lorca (*lor'kah*), Sp......En
L'Orient (*lo-re-oɴ'*), Fr..Ee
Luc'ca, It..............Li
Lucerne (*lu-sern'*), Swz..Kf
Lyons, Fr..............Ig
Madrid', Sp............Dk
Magenta (*ma̭-jen'ta̭*), It..Kh
Mal'aga, Sp............Co
Maria Theresienstadt, Aus.
(*mah-re'ah tĕr-ay'ze-ḙn-staht*)..............Qg
Marly (*mar-le'*), Fr......At
Marseilles (*mar-saylz'*), Fr. Jj
Messina (*mes-se'nah*), It..On
Meudon (*mᴜh-dōɴ'*), Fr..Bu
Mil'an, It..............Kh
Missolonghi, Gr.........Sm
(*mis-so-long'ge*)
Modena (*mod'e-na̭*), It...Lh
Modica (*mod'e-kah*), It...Oo
Monastir, Tur..........Rk
(*mon-as-teer'*)
Montauban, Fr..........Gi
(*mōɴ-to-boɴ'*)
Montpellier, Fr..........Ii
(*mont-pel'le-er*)
Mostar (*mos-tar'*), Aus...Pi
Moulins (*moo-laɴ'*), Fr...Ig
Murcia (*mur'she-a̭*), Sp...En
Nancy, Fr..............Je
Nantes (*nants*), Fr.......Fe
Naples, It..............Nk
Narbonne (*nar-bon'*), Fr..Hi

Nau'plia, Gr............Tn
Navarino, Gr...........So
(*nav-a̭-re'no*)
Neuilly (*nᴜh-ye'*), Fr.....Cs
Nevers (*nḙh-vayr'*), Fr...Hf
Nice (*neece*), Fr..........Ji
Nîmes (*neem*), Fr.........Ii
Ol'mutz, Aus...........Od
Opor'to, Por............Bj
Orense (*o-ren'say*), Sp....Bi
Orleans (*or'le-a̭nz*), Fr...He
Ostia (*os'te-ah*), It.......Gu
Oviedo (*o-ve-ay'do*), Sp..Ch
Pad'ua, It..............Mh
Palencia, Sp............Dj
(*pa̭-len'she-a̭*)
Paler'mo, It............Nn
Palma (*pahl'mah*), Sp..Hm
Palos (*pah'loce*), Sp......Bn
Pamplona, Sp...........Fj
(*pahm-plo'nah*)
Paris (*păr'is*), Fr....Ct, Hd
Par'ma, It..............Lh
Patras (*pa̭-tras'*), Gr.....Sn
Pau (*po*), Fr.............Fi
Pera (*pay'rah*), Tur.....Mt
Périgueux, Fr..........Gh
(*pay-re-gᴜh'*)
Perpignan, Fr..........Hj
(*pĕr-peen-yoɴ'*)
Perugia (*pay-roo'jah*), It. Mj
Pescara (*pes-kah'rah*), It. Nj
Philippop'olis, Tur.... ..Tj
Pil'sen, Aus............Nd
Pisa (*pe'sah*), It.........Li
Plevna (*ploo'nah*), Bul...Ti
Poitiers (*poy-teerz'*), Fr..Gf
Portalegre, Por.........Bl
(*por-tah-lay'gray*)
Port Mahon, Sp.........Il
(*mah-hone'*)
Potenza (*po-ten'zah*), It..Ol
Prague (*prayg*), Aus....Nd
Pres'burg, Aus..........Pe
Prisrend', Tur..........Rj
Raab (*rahb*), Aus........Pe
Ravenna (*ra̭-ven'na̭*), It..Mi
Reggio (*red'jo*), It.......On
Reichenberg, Aus........Nc
(*ri'ᴋḙn-berg*)

Rennes (*ren*), Fr.........Fe
Rheims (*reemz*), Fr.......Id
Rochefort (*rosh-for'*), Fr..Fg
Rome, It..........Mk, Jr
Roubaix (*roo-bay'*), Fr....Ic
Rouen (*roo'ḙn*), Fr.......Hd
Rustchuk, Bul..........Th
(*roos-chook'*)
Salamanca, Sp..........Cj
(*sal-a̭-mang'ka̭*)
Saler'no, It.............Ol
Salonica, Tur...........Sk
(*sah-lo-ne'kah*)
Salzburg, Aus..........Nf
(*sawltz'burg*)
San Marino, It..........Mi
(*sahn mah-re'no*)
Santan'der, Sp..........Di
Santarem, Por..........Al
(*sahn-tah-reɴ'*)
Santiago, Sp............Bi
(*sahn-te-ah'go*)
Saragossa, Sp...........Fj
(*săr-a̭-gos'sa̭*)
Sassari (*sahs'sah-re*), It...Kl
Sceaux (*so*), Fr..........Cu
Schemnitz, Aus.........Pe
(*shem'nits*)
Scutari (*skoo'tah-re*), Tur. Qj
San Sebastian, Sp........Ei
Sego'via, Sp............Dk
Semlin (*sem-leen'*), Aus..Qh
Seres (*sĕr'ĕs*), Tur........Sk
Setubal, Por............Al
(*say-too'bahl*)
Sev'ille, Sp.............Cn
Sèvres (*sevr*), Fr.........Bt
Shumla (*shoom'lah*), Bul. Uh
Silis'tria, Bul...........Uh
Sisto'va, Bul...........Th
Sophia (*so-fe'a̭*), Bul......Si
Spalatro, Aus...........Oi
(*spah-lah'tro*)
St. Cloud, Fr. ....Bt
St. Den'is, Fr...........Cr
St. Étienne, Fr..........Ih
(*saɴt ay-te-en'*)
St. Ger'main, Fr.........As
St. Quentin, Fr..........Id
(*saɴ koɴ-taɴ'*)

Syra (*se'rah*), Gr........Un
Syracuse (*sĭr'a̭-kuse*), It..Oo
Szegedin, Aus...........Qg
(*seg'ed-een*)
Talavera, Sp............Cl
(*tah-lah-vay'rah*)
Taranto (*tah'rahn-to*), It..Pl
Tarnopol, Aus..........Sc
(*tar-no'pol*)
Tarragona, Sp..........Gk
(*tar-rah-go'nah*)
Tchernetz, Rou.........Sh
(*chĕr-nets'*)
Temesvar, Aus..........Rg
(*tem-esh-vahr'*)
Ternova, Bul............Ti
(*tĕr'no-vah*)
Tokay (*to-kay'*), Aus.....Re
Tole'do, Sp.............Dl
Tophana, Tur...........Mt
(*to'fah-nah*)
Toulon (*too-lōɴ'*), Fr......Jj
Toulouse (*too-looz'*), Fr...Gi
Tours (*toor*), Fr.........Gf
Trapani (*trah'pah-ne*), It. Mn
Trent, Aus..............Mg
Trieste (*tre-est'*), Aus....Ng
Troppau (*trop'pou*), Aus..Pc
Troyes (*trwah*), Fr........Ie
Tu'rin, It..............Kh
Valence (*vah-loɴss'*), Fr..Ih
Valencia, Sp............Fm
(*va̭-len'she-a̭*)
Valladolid', Sp..........Dj
Varna (*var'nah*), Bul....Vh
Venice (*ven'iss*), It......Mh
Verona (*vay-ro'nah*), It..Lh
Versailles, Fr.......Au, He
(*vḙr-saylz'*)
Vienna (*ve-en'na̭*), Aus...Oc
Vigo (*ve'go*), Sp..........Bi
Villeneuve (*veel-nᴜv'*), Fr. Dv
Vincennes (*vin-senz'*), Fr. Dt
Viterbo (*ve-tĕr'bo*), It....Mj
Vitoria (*ve-to're-ah*), Sp..Ei
Wid'in, Bul.............Sh
Xeres (*hay-reth'*), Sp.....Bn
Zan'te, Gr..............Rn
Zara (*zah'rah*), Aus......Oi
Zurich (*zoo'rik*), Swz....Kf

LARGEST CITIES OF THE WORLD,

EACH HAVING MORE THAN TWO HUNDRED THOUSAND INHABITANTS.

City.	Country.	Year.	Population.	City.	Country.	Year.	Population.
London..........	Eng.	1881	3,814,571	Baltimore........	U. S.	1880	332,313
Paris............	Fr'nce	1882	2,225,916	Marseilles	France	1876	318,868
Pekin	China	....	1,500,000	Dublin	Ireland	1881	338,579
New York.......	U. S.	1880	1,206,299	Leeds	Eng.	1881	309,126
Vienna..........	Aus.	1880	1,103,857	Buda-Pesth......	Austria	1880	359,821
Berlin...........	Ger.	1880	1,022,360	Warsaw	Russia	1878	336,703
Canton..........	China	....	1,000,000	Amsterdam......	Holland	1880	326,196
Chang-chow.....	China	....	1,000,000	Amoy...........	China	....	300,000
Siang-foo........	China	....	1,000,000	Buenos Ayres....	Ar. Rep.	1880	248,710
Siang-tan........	China	....	1,000,000	Sheffield.........	Eng.	1881	284,410
Tien-tsin	China	....	950,000	Lucknow........	India	1881	261,485
Philadelphia.....	U. S.	1880	847,170	Ozaka...........	Japan	1881	291,086
Tokio	Japan	1879	811,510	Shanghai........	China	....	278,000
(with suburbs).	......	1881	1,140,566	Lienkong........	China	....	275,000
Ching-too	China	....	800,000	Hamburg........	Ger.	1880	289,859
Calcutta.........	India	1881	683,329	(with suburbs).	....	....	410,127
St. Petersburg....	Russ.	1869	667,963	Milan	Italy	1879	292.524
Bombay.........	India	1881	753,000	Cincinnati.......	U. S.	1880	255,139
Moscow	Russ.	1871	601,969	Melbourne.......	Austra.	1881	280,836
Constantinople...	Tur.	....	600,000	Chungking-foo...	China	....	250,000
Foo-chow........	China	....	600,000	Taijuen-foo......	China	....	250,000
Hang-chow......	China	....	600,000	Waihien.........	China	....	250,000
Han-kow........	China	....	600,000	Breslau..........	Ger.	1880	272,390
Shao-hing	China	....	600,000	Kioto....	Japan	1877	229,810
Glasgow.........	Scot.	1881	511,532	Rome	Italy	1879	289,321
Brooklyn........	U. S.	1880	566,663	San Francisco....	U. S.	1880	233,959
Manchester }	Eng.	1881	{ 341,508	Palermo.........	Italy	1879	236,579
Salford.... }			{ 176,233	Havana..........	Cuba	....	230,000
Liverpool........	Eng.	1881	552,425	Mexico..........	Mexico	....	242,000
Chicago	U. S.	1880	503,185	Rio Janeiro......	Brazil	1872	228,743
Bangkok	Siam	....	500,000	(with suburbs).	....	....	274,972
Su-chow.........	China	....	500,000	Edinburgh.......	Scot.	1881	228,190
Wan-chow.......	China	....	500,000	New Orleans.....	U. S.	1880	216,092
Naples	Italy	1879	458,614	Barcelona........	Spain	1877	215,965
Nankin..........	China	....	450,000	Bordeaux........	France	1876	215,140
Fachan..........	China	....	400,000	Turin	Italy	1879	231,636
Madras..........	India	1881	405,948	Belfast	Ireland	1881	207,671
Birmingham.....	Eng.	1881	400,757	Bristol	Eng.	1881	206,503
Madrid..........	Spain	1877	367,284	Copenhagen	Den.	1880	234,850
Boston	U. S.	1880	362,839	Lisbon	Por.	1878	203,681
Yang-chow	China	....	360,000	(with suburbs).	....	...	233,389
Cairo............	Egypt	1877	327,462	Brussels.........	Bel.	1880	170,345
Lyons............	Fr'nce	1876	342,815	(with suburbs).	....	....	399,936
St. Louis	U. S.	1880	350,518				

Some of the Chief Mountains.

The highest peak of each Grand Division is in small capitals. *V* means *volcano*.

North America.

		Feet.
ST. ELIAS.......	Alaska.	17,900
Popocatepetl, *V*..	Mexico.	17,720
Orizaba, *V*......	"	17,380
Whitney........	Sierra Nevada.	14,887
Shasta..........	" "	14,442
Harvard........	Rocky Mts....	14,383
Long's Peak....	" "	14,271
Holy Cross......	" " ...	14,176
Pike's Peak.....	" " ...	14,147
Fremont's Peak.	" "	13,570
Mitchell........	Black Mts.....	6,707
Washington.....	White Mts....	6,293
Hecla, *V*........	Iceland........	5,110

South America.

ILLAMPU........	Andes.........	24,812
Aconcagua......	"	22,422
Chimborazo, *V*..	"	21,424
Arequipa, *V*....	"	20,300
Cotopaxi, *V*.....	"	18,875

Europe.

ELBURZ.........	Caucasus......	18,526
Blanc...........	Alps	15,784
Maladetta.......	Pyrenees......	11,168
Etna, *V*.........	Sicily.........	10,874
Carpathian......	Highest peak..	9,909
Corno..........	Apennines.....	9,546
Ural............	Highest peak..	5,397
Vesuvius, *V*....	Italy..........	3,948

Asia.

EVEREST........	Himalayas.....	29,002
Kanchinjinga ...	"	28,156
Hindoo-Koh	Hindoo Koosh.	20,000
Ararat..........	Armenia......	16,915

Africa.

KILIMANJARO }	Mountains of the Moon	{ 18,715
Kenia }		{ 18,000

Oceania.

OPHIR..........	Sumatra.......	13,800
Mauna Loa, *V*...	Sandwich I....	13,758

Some of the Chief Rivers.

North America.	Length in mi.	Area of Basin in sq. mi.
Missouri-Mississippi.........	4,194..	1,244,000
Arkansas..................	2,170..	189,000
Ohio......................	975..	202,400
Mackenzie (Athabasca, Slave).	2,300..	443,000
St. Lawrence (with the lakes).	2,200..	335,515
Yukon	2,000..	200,000
Rio Grande	1,800..	240,000
Saskatchewan..............	1,732..	432,000
Columbia..................	1,400..	298,000
Colorado (with the Green)....	1,200.	257,000
South America.		
Amazon....................	3,750..	2,264,000
Plata (Parana and Paraguay).	2,500..	1,242,000
Orinoco....................	1,600..	252,000
San Francisco..............	1,550..	250,000
Europe.		
Volga.....................	2,130..	517,272
Danube....................	1,613..	299,435
Ural......................	1,309..	90,889
Dnieper...................	1,272..	193,195
Don.......................	1,185..	170,638
Petchora..................	1,120..	117,996
Rhine.....................	853..	65,057
Dwina.....................	788..	142,701
Elbe......................	723..	58,743
Asia.		
Yang-tse-Kiang.............	3,320..	950,000
Yenisei....................	2,800..	1,000,000
Hoang-Ho..................	2,700..	537,400
Lena......................	2,400..	800,000
Indus.....................	1,850..	402,000
Amoor.....................	1,800..	786,000
Brahmapootra..............	1,800..	450,000
Euphrates.................	1,780..	255,000
Ganges....................	1,600..	416,000
Africa.		
Nile......................	4,000..	1,000,000
Niger.....................	3,000..	800,000
Congo.....................	2,900..	950,000
Zambesi...................	1,600..	600,000
Orange....................	1,000..	446,000

POPULATIONS OF THE PRINCIPAL CITIES AND TOWNS OF THE UNITED STATES,

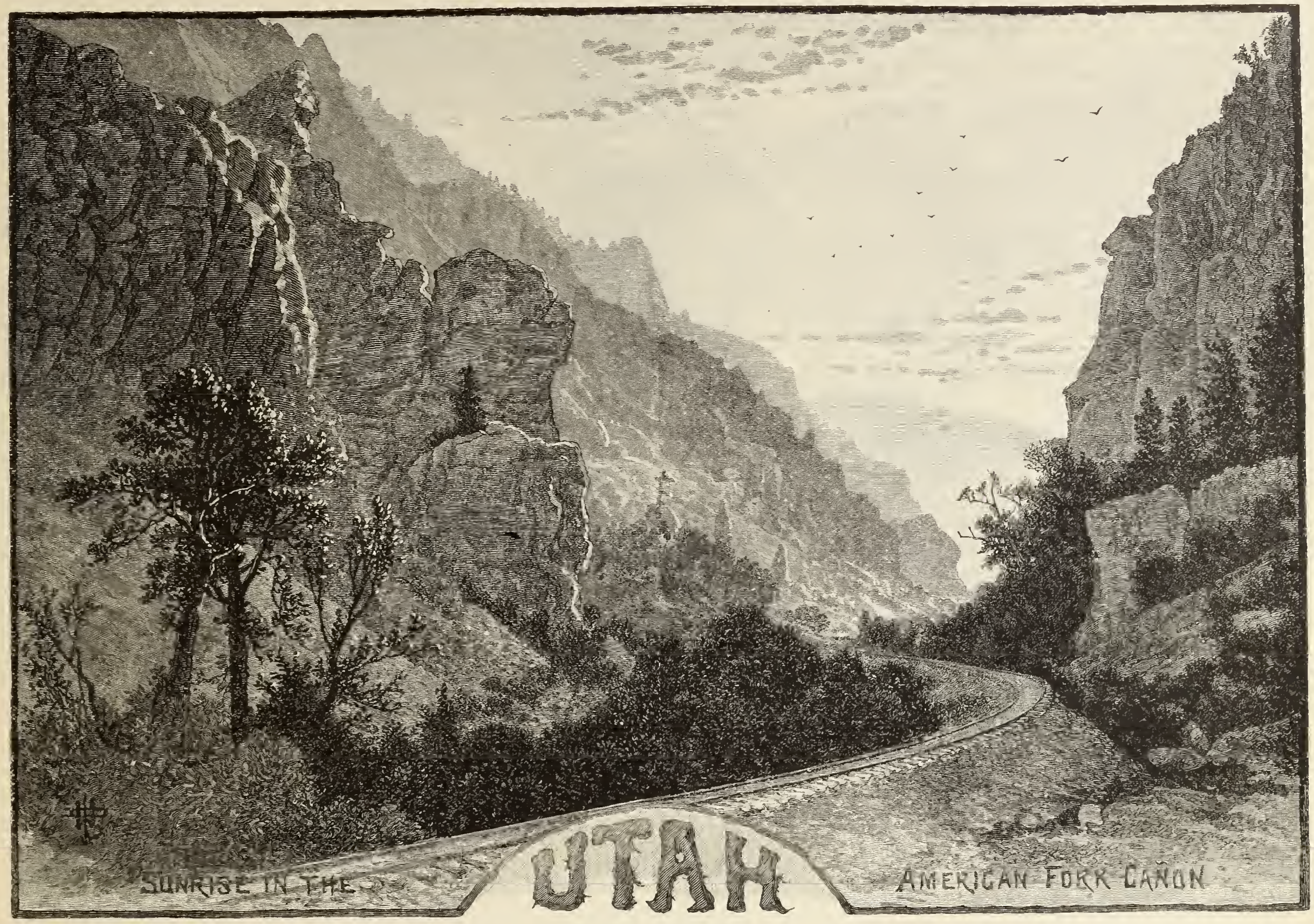
ACCORDING TO THE CENSUS OF 1880.

(*Tp.* denotes *township.*)

Abilene, Kan	2,360
Adrian, Mich	7,849
Afton, Io	1,231
Aiken, S. C	1,817
Akron, O	16,512
Albany, Ga	3,216
Albany, N. Y	90,758
Albany, Ore	1,867
Albia, Io	2,435
Albion, Mich	2,716
Albuquerque, N. Mex	2,315
Alexandria, Va	13,659
Allegan, Mich	2,305
Allegheny, Pa	78,682
Allentown, Pa	18,063
Alliance, O	4,636
Alpena, Mich	6,153
Alton, Ill	8,975
Altoona, Pa	19,710
Americus, Ga	3,635
Amsterdam, N. Y	9,466
Anderson, Ind	4,126
Andover (tp.), Mass	5,169
Annapolis, Md	6,642
Ann Arbor, Mich	8,061
Anoka, Minn	2,706
Appleton, Wis	8,005
Arkadelphia, Ark	1,506
Arkansas City, Kan	1,012
Asbury Park, N. J	1,640
Asheville, N. C	2,616
Ashland, Ky	3,280
Ashland, O	3,004
Ashland, Pa	6,052
Ashtabula, O	4,445
Astoria, Ore	2,803
Atchison, Kan	15,105
Athens, Ga	6,099
Atlanta, Ga	37,409
Atlantic, Io	3,662
Atlantic City, N. J	5,477
Attleboro (tp.), Mass	11,111
Auburn, Me	9,555
Auburn, N. Y	21,924
Augusta, Ga	21,891
Augusta, Me	8,665
Aurora, Ill	11,873
Aurora, Ind	4,435
Austin, Minn	2,305
Austin, Tex	10,960
Babylon, N. Y	2,142
Baker City, Ore	1,258
Ballston Spa, N. Y	3,011
Baltimore, Md	332,313
Bangor, Me	16,856
Baraboo, Wis	3,266
Bardstown, Ky	1,803
Barnesville, Ga	1,962
Batavia, N. Y	4,845
Bath, Me	7,874
Baton Rouge, La	7,197
Battle Creek, Mich	7,063
Baxter Springs, Kan	1,177
Bay City, Mich	20,693
Bayonne, N. J	9,372
Bay St. Louis, Miss	1,978
Beardstown, Ill	3,136
Beatrice, Neb	2,447
Beaufort, N. C	2,009
Beaufort, S. C	2,549
Beaver Dam, Wis	3,416
Belfast, Me	5,308
Bellaire, O	8,025
Bellefontaine, O	3,998
Bellefonte, Pa	3,026
Belleville, Ill	10,683
Bellows Falls, Vt	2,229
Beloit, Kan	1,835
Beloit, Wis	4,790
Bennington (tp.), Vt	6,333
Berlin, Wis	3,353
Bethlehem, Pa	5.193
Beverly, N. J	1,759
Biddeford, Me	12,651
Big Rapids, Mich	3,552
Biloxi, Miss	1,540
Binghamton, N. Y	17,317
Bismarck, Dak	1,758
Blair, Neb	1,317
Bloomfield, Io	1,531
Bloomfield (tp.), N. J	5,748
Bloomington, Ill	17,180
Bloomington, Ind	2,756
Bloomsburg, Pa	3,702
Boisé City, Id. T	1,899
Boone, Io	3,330
Booneville, Mo	3,854
Boonton, N. J	2,277
Bordentown, N. J	4,258
Boston, Mass	362,839
Boulder, Col	3,069
Bowling Green, Ky	5,114
Bradford, Pa	9,197
Braidwood, Ill	5,524
Brattleboro (tp.), Vt	5,880
Brazil, Ind	3,441
Brenham, Tex	4,101
Bridgeport, Conn	27,643
Bridgeton, N. J	8,722
Bristol, Pa	5,273
Bristol, Tenn	1,647
Brookline (tp.), Mass	8,057
Brooklyn, N. Y	566,663
Brownsville, Tenn	2,564
Brownsville, Tex	4,938
Brownville, Neb	1,309
Brunswick, Ga	2,891
Brunswick (tp.), Me	5,384
Bryan, Tex	2,710
Bucyrus, O	3,835
Buffalo, N. Y	155,134
Burlington, Io	19,450
Burlington, Kan	2,011
Burlington, N. J	6,090
Burlington (tp.), Vt	11,365
Bushnell, Ill	2,316
Butler, Pa	3,163
Butte City, Mont	3,363
Cairo, Ill	9,011
Calais, Me	6,173
Calumet (tp.), Mich	8,299
Cambridge, Ind	2,370
Cambridge, Mass	52,669
Cambridge, Md	2,262
Camden, N. J	41,659
Canajoharie, N. Y	2,013
Canandaigua, N. Y	5,726
Canton, Ill	3,762
Canton, Miss	2,083
Canton, O	12,258
Cape Girardeau, Mo	3,889
Cape May, N. J	1,699
Carbondale, Pa	7,714
Carlinville, Ill	3,117
Carlisle, Pa	6,209
Carrollton, Ill	1,934
Carrollton, Ky	1,332
Carson City, Nev	4,229
Carthage, Mo	4,167
Catlettsburg, Ky	1,225
Catskill, N. Y	4,320
Cedar Falls, Io	3,020
Cedar Rapids, Io	10,104
Centerville, Io	2,475
Central City, Col	2,626
Centralia, Ill	3,621
Chambersburg, Pa	6,877
Champaign, Ill	5,106
Charles City, Io	2,421
Charleston, S. C	49,984
Charleston, W. Va	4,192
Charlotte, Mich	2,910
Charlotte, N. C	7,094
Charlottesville, Va	2,676
Chattanooga, Tenn	12,892
Cheboygan, Mich	2,269
Chelsea, Mass	21,782
Chester, Pa	14,997
Chestertown, Md	2,359
Cheyenne, Wyo	3,456
Chicago, Ill	503,185
Chico, Cal	3,300
Chicopee (tp.), Mass	11,286
Chillicothe, Mo	4,078
Chillicothe, O	10,938
Chippewa Falls, Wis	3,982
Cicero, Ill	1,888
Cincinnati, O	255,139
Circleville, O	6,046
Claremont (tp.), N. H	4,704
Clarinda, Io	2,011
Clarksburg, W. Va	2,307
Clarksville, Tenn	3,880
Clay Center, Kan	1,753
Cleveland, O	160,146
Clinton, Io	9,052
Clinton (tp.), Mass	8,029
Cohoes, N. Y	19,416
Coldwater, Mich	4,681
Colorado Springs, Col	4,226
Columbia, Mo	3,326
Columbia, Pa	8,312
Columbia, S. C	10,036
Columbia, Tenn	3,400
Columbus, Ga	10,123
Columbus, Ind	4,813
Columbus, Kan	1,164
Columbus, Ky	1,338
Columbus, Miss	3,955
Columbus, Neb	2,131
Columbus, O	51,647
Concord, N. H	13,843
Concordia, Kan	1,853
Connellsville, Pa	3,609
Connersville, Ind	3,228
Corpus Christi, Tex	3,257
Corry, Pa	5,277
Corsicana, Tex	3,373
Cortland, N. Y	4,050
Corvallis, Ore	1,128
Coshocton, O	3,044
Council Bluffs, Io	18,063
Covington, Ky	29,720
Crawfordsville, Ind	5,251
Creston, Io	5,081
Crete, Neb	1,870
Crockett, Tex	4,957
Culpeper, Va	1,613
Cumberland, Md	10,693
Cuthbert, Ga	2,129
Cynthiana, Ky	2,101
Dallas, Tex	10,358
Dalles, The, Ore	2,232
Dalton, Ga	2,516
Danbury (tp.), Conn	11,666
Danville, Ill	7,733
Danville, Ky	3,074
Danville, Pa	8,346
Danville, Va	7,526
Davenport, Io	21,831
Dawson, Ga	1,576
Dayton, Ky	3,210
Dayton, O	38,678
Deadwood, Dak	3,777
Decatur, Ill	9,547
Decatur Ind	1,905
Decorah, Io	2,951
Dedham (tp.), Mass	6,233
Defiance, O	5,907
Delaware, O	6,894
Delphos, O	3,814
Demopolis, Ala	1,389
Denison, Tex	3,975
Denton, Tex	1,194
Denver, Col	35,629
Des Moines, Io	22,408
Detroit, Mich	116,340
Dixon, Ill	3,658
Donaldsonville, La	4,567
Dover, Del	2,811
Dover, N. H	11.687
Dover, N. J	2,958
Dubuque, Io	22,254
Duluth, Minn	2,645
Dunkirk, N. Y	7,248
Dunmore, Pa	5,151
Eastport (tp.), Me	4,006
Easton, Md	3,005
Easton, Pa	11,924
East Orange (tp.), N. J	8,349
East Portland, Ore	2,934
East Saginaw, Mich	19,016
Eau Claire, Wis	10,119
Effingham, Ill	3,065
Eldora, Io	1,584
El Dorado, Kan	1,411
Elgin, Ill	8,787
Elizabeth, N. J	28,229
Elizabethtown, Ky	2,526
Elkhart, Ind	6,953
Ellicott City, Md	1,784
Ellsworth, Me	5,052
Elmira, N. Y	20,541
Elyria, O	4,777
Empire City, Kan	1,367
Emporia, Kan	4,631
Englewood (tp.), N. J	4,076
Erie, Pa	27,737
Escanaba, Mich	3,026
Eufaula, Ala	3,836
Eugene City, Ore	1,117
Eureka, Cal	2,639
Eureka, Kan	1,127
Eureka, Nev	4,207
Eureka Springs, Ark	3,984
Evanston (tp.), Ill	6,703
Evanston, Wyo	1,277
Evansville, Ind	29,280
Exeter (tp.), N. H	3,569
Fairbury, Neb	1,251
Fairfield, Io	3,086
Fall River, Mass	48,961
Falls City, Neb	1,583
Fargo, Dak	2,693
Faribault, Minn	5,415
Fayetteville, N. C	3,485
Fergus Falls, Minn	1,635
Fernandina, Fla	2,562
Findlay, O	4,633
Fishkill (tp.), N. Y	10,732
Fitchburg, Mass	12,429
Flint, Mich	8,409
Flushing, N. Y	6,683
Fond du Lac, Wis	13,094
Fort Dodge, Io	3,586
Fort Edward, N. Y	2,988
Fort Howard, Wis	3,083
Fort Madison, Io	4,679
Fort Plain, N. Y	2,443
Fort Scott, Kan	5,372
Fort Smith, Ark	3,099
Fort Wayne, Ind	26,880
Fort Worth, Tex	6,663
Fostoria, O	3,569
Framingham (tp.), Mass	6,235
Frankfort, Ind	2,803
Frankfort, Ky	6,958
Franklin, Ind	3,116
Franklin, Ky	1,686
Franklin, Pa	5,010
Frederick, Md	8,659
Fredericksburg, Va	5,010
Fredonia, N. Y	2,692
Freehold, N. J	2,432
Freeport, Ill	8,516
Fremont, Neb	3,013
Fremont, O	8,446
Fulton, Mo	2,409
Fulton, N. Y	3,941
Gainesville, Ga	1,919
Gainesville, Tex	2,667
Galena, Ill	6,451
Galesburg, Ill	11,437
Galion, O	5,635
Gallatin, Tenn	1,938
Gallipolis, O	4,400
Galveston, Tex	22,248
Gardiner, Me	4,439
Garnett, Kan	1,389
Geneseo, Ill	3,522
Geneva, N. Y	4,090
Georgetown, Col	3,294
Georgetown, D. C	12,578
Georgetown, Ky	2,061
Georgetown, S. C	2,557
Gettysburg, Pa	2,814
Girard, Kan	1,289
Glasgow, Ky	1,510
Glens Falls, N. Y	4,900
Glenwood, Io	1,791
Gloucester, Mass	19,329
Gloucester C., N. J	5,347
Gloversville, N. Y	7,133
Golden, Col	2,730
Goldsboro, N. C	3,286
Grafton, W. Va	3,030
Grand Haven, Mich	4,862
Grand Island, Neb	2,963
Grand Rapids, Mich	32,016
Greeley, Col	1,297
Green Bay, Wis	7,464
Greencastle, Ind	3,644
Greenport, N. Y	2,370
Greensburg, Ind	3,138
Greenville, Ala	2,471
Greenville, Mich	3,144
Greenville, Miss	2,191
Greenville, O	3,535
Greenville, S. C	6,160
Grenada, Miss	1,914
Griffin, Ga	3,620
Grinnell, Io	2,415
Hackensack, N. J	4,248
Hackettstown, N. J	2,502
Haddonfield, N. J	1,480
Hagerstown, Md	6.627
Hamburg, Io	2,036
Hamilton, O	12,122
Hampton, Va	3,311
Hannibal, Mo	11,074
Harper's Ferry, W. Va	764
Harrisburg, Pa	30,762
Harrison, N. J	6,898
Harrisonburg, Va	2,831
Harrodsburg, Ky	2,202
Hartford, Conn	42,015
Hastings, Mich	2,531
Hastings, Minn	3,809
Hastings, Neb	2,817
Haverhill, Mass	18,472
Haverstraw, N. Y	3,506
Hazleton, Pa	6,935
Helena, Ark	3,652
Helena, Mont	3,624
Hempstead (tp.), N. Y	18,164
Henderson, Ky	5,365
Herkimer, N. Y	2,359
Hiawatha, Kan	1,375
Hillsboro, O	3,234
Hillsdale, Mich	3,441
Hoboken, N. J	30,999
Holland, Mich	2,620
Hollidaysburg, Pa	3,150
Holly Springs, Miss	2,370
Holyoke, Mass	21,915
Hoosick Falls, N. Y	4,530
Hopkinsville, Ky	4,229
Hornellsville, N. Y	8,195
Hot Springs, Ark	3,554
Houston, Tex	16,513
Howell, Mich	2,071
Hudson, N. Y	8,670
Hudson, Mich	2,254
Hudson, Wis	2,298
Humboldt, Kan	1,542
Huntingdon, Pa	4,125
Huntington, Ind	3,863
Huntington, W. Va	3,174
Huntsville, Ala	4,977
Huntsville, Tex	1,322
Hutchinson, Kan	1,540
Hyde Park, Ill	15,716
Idaho City, Id. T	1,522
Ilion, N. Y	3,711
Independence, Io	3,128
Independence, Kan	2,915
Independence, Mo	3,146
Indianapolis, Ind	75,056
Indianola, Io	2,146
Iola, Kan	1,096
Ionia, Mich	4,190
Iowa City, Io	7,123
Ironton, O	8,857
Ishpeming, Mich	6,039
Ithaca, N. Y	9,105
Jackson, Mich	16,105
Jackson, Miss	5,204
Jackson, O	3,021
Jackson, Tenn	5,377
Jacksonville, Fla	7,650
Jacksonville, Ill	10,927
Jamaica (tp.), N. Y	10,089
Jamestown, N. Y	9,357
Janesville, Wis	9,018
Jefferson (tp.), O	3,443
Jefferson, Tex	3,260
Jefferson, W's	2,115
Jefferson City, Mo	5,271
Jeffersonville, Ind	9,357
Jersey City, N. J	120,722
Johnstown, N. Y	5,013
Joliet, Ill	11,657
Joplin, Mo	7,038
Junction City, Kan	2,684
Kalamazoo, Mich	8,057
Kankakee (tp.), Ill	5,782
Kansas City, Mo	55,785
Kearney, Neb	1,782
Keene, N. H	6,784
Kendallville, Ind	2,373
Kenosha, Wis	5,039
Kenton, O	3,940
Keokuk, Io	12,117
Key West, Fla	9,890
Kingston, N. Y	18,344

POPULATIONS OF THE PRINCIPAL CITIES AND TOWNS OF THE UNITED STATES, ACCORDING TO THE CENSUS OF 1880.

Knoxville, Io	2,577
Knoxville, Tenn	9,693
Kokomo, Ind	4,042
La Crosse, Wis	14,505
Lafayette, Ind	14,860
La Grange, Ga	2,295
Lake (tp.), Ill	18,396
Lake City, Minn	2,596
Lambertville, N. J	4,183
Lancaster (tp.), N. H	2,721
Lancaster, O	6,803
Lancaster, Pa	25,769
Lansing, Mich	8,319
Lansingburg, N. Y	7,432
Lapeer, Mich	2,911
La Porte, Ind	6,195
Laramie City, Wyo	2,696
Laredo, Tex	3,521
Larned, Kan	1,066
Lawrence, Kan	8,510
Lawrence, Mass	39,151
Lawrenceburgh, Ind	4,668
Leadville, Col	14,820
Leavenworth, Kan	16,546
Lebanon, Ky	2,054
Lebanon, Pa	8,778
Leesburg, Va	1,726
Lemont, Ill	2,108
Lewisburg, Pa	3,080
Lewiston, Me	19,083
Lewiston, Pa	3,222
Lexington, Ky	16,656
Lexington, Mo	3,996
Lexington, Va	2,771
Liberty, Va	2,191
Lima, O	7,567
Lincoln, Ill	5,639
Lincoln, Neb	13,003
Litchfield, Ill	4,326
Little Falls, N. Y	6,910
Little Rock, Ark	13,138
Lock Haven, Pa	5,845
Lockport, N. Y	13,522
Logansport, Ind	11,198
London, O	3,067
Long Branch, N. J	3,833
Long Island C., N. Y	17,129
Los Angeles, Cal	11,183
Louisiana, Mo	4,325
Louisville, Ky	123,758
Lowell, Mass	59,475
Ludington, Mich	4.190
Lynchburg, Va	15,959
Lynn, Mass	38,274
Lyons, Io	4,095
Lyons, N. Y	3,820
Macon, Ga	12,748
Macon, Mo	3,046
Madison, Ga	1,974
Madison, Ind	8,945
Madison, N. J	1,756
Madison, Wis	10,324
Mahanoy City, Pa	7,181
Malden (tp.), Mass	12,017
Malone, N. Y	4,193
Manchester, Io	2,275
Manchester, N. H	32,630
Manchester, Va	5,729
Manhattan, Kan	2,105
Manistee, Mich	6,930
Manitowoc, Wis	6,367
Mankato, Minn	5,550
Mansfield, O	9,859
Maquoketa, Io	2,467
Marblehead (tp.), Mass	7,467
Marengo, Io	1,738
Marietta, O	5,444
Marion, Ala	2,074
Marion, Ind	3,182
Marion, Io	1,939
Marion, O	3,899
Marlboro (tp.), Mass	10,127
Marquette, Mich	4,690
Marshall, Io	6,240
Marshall, Mich	3,795
Marshall, Tex	5,624
Marshalltown, Io	6,500
Martinsburg, W. Va	6,335
Marysville, Cal	4,321
Maryville, Mo	3,485
Mason City, Io	2,510
Mason City, W. Va	1,186
Massillon, O	6,836
Matawan, N. J	1,437
Mattoon, Ill	5,742
Mauch Chunk, Pa	3,752
Maysville, Ky	5,220
McGregor, Io	1,602
McKeesport, Pa	8,212
McMinnville, Tenn	1,244
McPherson, Kan	1,590
Meadville, Pa	8,860
Mechanicsburg, Pa	3,018
Medford (tp.), Mass	7,573
Memphis, Tenn	33,592
Menasha, Wis	3,144
Mendota, Ill	4,142
Menominee, Mich	3,288
Menomonee, Wis	2,589
Meriden (tp.), Conn	18,340
Meridian, Miss	4,008
Mexico, Mo	3,835
Michigan City, Ind	7,366
Middleport, O	3,032
Middletown (tp.), Conn	11,732
Middletown, N. Y	8,494
Middletown, O	4,538
Middletown, Pa	3,351
Milledgeville, Ga	3,794
Millville, N. J	7,660
Milwaukee, Wis	115,587
Mineral Point, Wis	2,915
Minersville Pa	3,249
Minneapolis, Minn	46,887
Moberly, Mo	6,070
Mobile, Ala	29,132
Moline, Ill	7,800
Monmouth, Ill	5,000
Monroe, La	2,070
Monroe, Mich	4,930
Monroe, Wis	3,293
Montgomery, Ala	16,713
Monticello, Io	1,877
Montpelier, Vt	3,219
Moorestown, N. J	1.497
Morgan City, La	2,015
Morristown, N. J	5,418
Moundsville, W. Va	1,774
Mt. Clemens, Mich	3,057
Mt. Pleasant, Io	4,410
Mt. Sterling, Ky	2,087
Mt. Vernon, Ind	3,730
Mt. Vernon, O	5,249
Muncie, Ind	5,219
Murfreesboro, Tenn	3,800
Muscatine, Io	8,295
Muskegon, Mich	11,262
Napa City, Cal	3,731
Naperville, Ill	2,074
Napoleon, O	3,032
Nashua, N. H	13,397
Nashville, Tenn	43,350
Natchez, Miss	7,058
Natchitoches, La	2,785
Natick (tp.), Mass	8,479
Nebraska City, Neb	4,183
Neenah, Wis	4,202
Negaunee, Mich	3,931
Nevada, Cal	4,022
Nevada, Io	1,541
New Albany, Ind	16,423
Newark, N. J	136,508
Newark, O	9,600
New Bedford, Mass	26,845
New Berne, N. C	6,443
New Brighton, N. Y	12,679
New Brighton, Pa	3,653
New Britain (tp.), Conn	13,979
New Brunswick, N. J	17,166
Newburg, N. Y	18,049
Newburyport, Mass	13,538
New Castle, Del	3,700
New Castle, Ind	2,299
New Castle, Pa	8,418
New Haven, Conn	62,882
New Iberia, La	2,709
New London, Conn	10,537
New London, Wis	1,808
Newnan, Ga	2,006
New Orleans, La	216,090
New Philadelphia, O	3,070
Newport, Ky	20,433
Newport (tp.), N. H	2,612
Newport, R. I	15,693
Newton, Io	2,607
Newton Kan	2,601
Newton, Mass	16,995
New Ulm, Minn	2,471
New York, N. Y	1,206,299
Nicholasville, Ky	2,303
Niles, Mich	4,197
Norfolk, Va	21,966
Norristown, Pa	13,063
North Adams, Mass	10,191
Northampton (tp.), Mass	12,172
Northfield, Minn	2,296
Norwalk, Conn	13,956
Norwalk, O	5,704
Norwich, Conn	21,143
Nyack, N. Y	3,881
Oakland, Cal	34,555
Oberlin, O	3,242
Oconto, Wis	4,171
Ogden, Utah	6,069
Ogdensburg, N. Y	10,341
Oil City, Pa	7,315
Okolona, Miss	1,858
Olathe, Kan	2,285
Olney, Ill	3,512
Olympia, Wash	1,232
Omaha, Neb	30,518
Opelika, Ala	3,245
Opelousas, La	1,676
Orange, N. J	13,207
Oregon City, Ore	1,263
Osage, Io	2,012
Osage, Kan	2,098
Osceola, Io	1,769
Oshkosh, Wis	15,748
Oskaloosa, Io	4,598
Oswego, Kan	2,351
Oswego, N. Y	21,116
Ottawa, Ill	7,834
Ottawa, Kan	4,032
Ottumwa, Io	9,004
Owasso, Mich	2,501
Owatonna, Minn	3,161
Owego, N. Y	5,525
Owensboro, Ky	6,231
Oxford, Ala	1,361
Oxford, Miss	1,534
Oxford, N. C	1,349
Paducah, Ky	8,036
Palatka, Fla	1,616
Palestine, Tex	2,997
Palmyra, Mo	2,479
Pana, Ill	3,009
Paola, Kan	2,313
Paris, Ill	4,373
Paris, Ky	3,204
Paris, Tex	3,980
Parkersburg, W. Va	6,582
Parsons, Kan	4,199
Passaic City, N. J	6,532
Pass Christian, Miss	1,410
Paterson, N. J	51,031
Pawtucket, R. I	19,030
Peekskill, N. Y	6,893
Pekin, Ill	5,993
Pella, Io	2,430
Pensacola, Fla	6,845
Peoria, Ill	29,259
Perth Amboy, N. J	4,808
Peru, Ind	5,280
Petaluma, Cal	3,326
Petersburg, Va	21,656
Philadelphia, Pa	847,170
Phillipsburg, N. J	7,181
Phœnix, Ariz	1,708
Phœnixville, Pa	6,682
Piedmont, W. Va	1,853
Pine Bluff, Ark	3,203
Piqua, O	6,031
Pittsburgh, Pa	156,389
Pittsfield (tp.), Mass	13,364
Pittston, Pa	7,472
Placerville, Cal	1,951
Plainfield, N. J	8,125
Platteville, Wis	2,687
Plattsburg, N. Y	5,245
Plattsmouth, Neb	4,175
Plymouth, Ind	2,570
Plymouth (tp.), Mass	7,093
Plymouth, Pa	6,065
Pomeroy, O	5,560
Pontiac, Mich	4,509
Portage, Wis	4,346
Port Huron, Mich	8,883
Port Jefferson, N. Y	1,724
Port Jervis, N. Y	8,678
Portland, Me	33,810
Portland, Ore	17,577
Port Richmond, N. Y	3,561
Portsmouth, N. H	9,690
Portsmouth, O	11,321
Portsmouth, Va	11,388
Pottstown, Pa	5,305
Pottsville, Pa	13,253
Poughkeepsie, N. Y	20,207
Prairie du Chien, Wis	2,777
Prescott, Ariz	1,836
Princeton, Ill	3,439
Princeton, Ind	2,566
Princeton, Ky	1,234
Princeton, N. J	3,209
Providence, R. I	104,857
Pueblo, Col	3,217
Pulaski, Tenn	2,089
Quincy, Ill	27,268
Quincy (tp.), Mass	10,570
Racine, Wis	16,031
Rahway, N. J	6,455
Raleigh, N. C	9,265
Raritan, N. J	2,046
Reading, Pa	43,278
Red Bank, N. J	2,684
Red Bluff, Cal	2,106
Red Oak, Io	3,755
Redwing, Minn	5,876
Reidsville, N. C	1,316
Renovo, Pa	3,708
Richmond, Ind	12,742
Richmond, Ky	2,909
Richmond, Va	63,600
Ripon, Wis	3,117
Rochester, Minn	5,103
Rochester, N. Y	89,366
Rockford, Ill	13,129
Rock Island, Ill	11,659
Rockland, Me	7,599
Rockport, Ind	2,382
Rome, Ga	3,877
Rome, N. Y	12,194
Rushville, Ind	2,515
Russellville, Ky	2,058
Rutherford, N. J	2,299
Rutland (tp.), Vt	12,149
Saco, Me	6,389
Sacramento, Cal	21,420
Sag Harbor, N. Y	1,996
Saginaw, Mich	10,525
Salem, Mass	27,563
Salem, N. C	1,340
Salem, N. J	5,056
Salem, O	4,041
Salem, Ore	2,538
Salem, Va	1,759
Salina, Kan	3,111
Salisbury, Md	2,581
Salisbury, N. C	2,723
Salt Lake C., Utah	20,768
San Antonio, Tex	20,550
San Bernardino, Cal	1,673
San Diego, Cal	2,637
Sandusky, O	15,838
Sandy Hill, N. Y	2,487
San Francisco, Cal	233,959
San José, Cal	12,567
San Luis Obispo, Cal	2,243
Santa Barbara, Cal	3,469
Santa Clara, Cal	2,416
Santa Cruz, Cal	3,898
Santa Fé, N. Mex	6,635
Santa Rosa, Cal	3,616
Saratoga Sp., N. Y	10.820
Saugerties, N. Y	3,923
Savannah, Ga	30,709
Schenectady, N. Y	13,655
Schuylkill Haven, Pa	3,052
Scranton, Pa	45,850
Seattle, Wash	3,533
Sedalia, Mo	9,561
Seguin, Tex	1,363
Selma, Ala	7,529
Seneca, Kan	1,203
Seneca Falls, N. Y	5,880
Seward, Neb	1,525
Seymour, Ind	4,250
Shakopee, Minn	2,011
Shamokin, Pa	8,184
Sharon, Pa	5,684
Sheboygan, Wis	7,314
Shelbyville, Ind	3,745
Shelbyville, Ky	2,393
Shelbyville, Tenn	1,869
Shenandoah, Pa	10,147
Shepherdstown, W. Va	1,533
Sherman, Tex	6,093
Shreveport, La	8,009
Sidney, O	3,823
Sigourney, Io	1,735
Silver Cliff, Col	5,040
Sing Sing, N. Y	6,578
Sioux City, Io	7,366
Sioux Falls, Dak	2,164
Skowhegan (tp.), Me	3,860
Somerville, Mass	24,933
Somerville, N. J	3,105
Sonora, Cal	1,492
South Bend, Ind	13,280
South Orange, N. J	2,178
Sparta, Wis	2,387
Springfield, Ill	19,743
Springfield, Mass	33,340
Springfield, Mo	6,522
Springfield, O	20,730
St. Albans (tp.), Vt	7,193
Stamford (tp.), Conn	11,297
Statesville, N. C	1,062
St. Augustine, Fla	2,293
Staunton, Va	6,664
St. Charles, Mo	5,014
St. Cloud, Minn	2,462
Sterling, Ill	5,087
Steubenville, O	12,093
Stevens Point, Wis	4,449
Stillwater, Minn	9,055
St. Johnsbury (tp.), Vt	5,800
St. Joseph, Mich	2,603
St. Joseph, Mo	32,431
St. Louis, Mo	350,518
Stockton, Cal	10,282
Stonington (tp.), Conn	7,355
St. Paul, Minn	41,473
St. Peter, Minn	3,436
Streator, Ill	5,157
Sturgis, Mich	2,060
Suffolk, Va	1,963
Sullivan, Ind	2,161
Susquehanna, Pa	3,467
Sycamore, Ill	3,028
Syracuse, N. Y	51,792
Tahlequah, Ind. Ter	525
Talladega, Ala	1,233
Tallahassee, Fla	2,494
Tama, Io	1,289
Tamaqua, Pa	5,730
Taunton, Mass	21,213
Tecumseh, Mich	2,111
Tecumseh, Neb	1,268
Terre Haute, Ind	26,042
Terrell, Tex	2,003
Texarkana, Tex., Ark	3,223
Thomaston (tp.), Me	3,017
Thomasville, Ga	2,555
Thibodeaux, La	1,515
Three Rivers, Mich	2,525
Tiffin, O	7,879
Titusville, Pa	9,046
Toledo, O	50,137
Topeka, Kan	15,452
Towanda, Pa	3,814
Trenton, Mo	3,326
Trenton, N. J	29,910
Trinidad, Col	2,225
Troy, Ala	2,294
Troy, N. Y	56,747
Troy, O	3,803
Tucson, Ariz	7,007
Tuscaloosa, Ala	2,017
Tuscumbia, Ala	1,369
Tyler, Tex	2,423
Union, N. J	5,849
Uniontown, Pa	3,265
Upper Sandusky, O	3,540
Urbana, O	6,252
Utica, N. Y	33,914
Vallejo, Cal	5,987
Valley Falls, Kan	1,016
Valparaiso, Ind	4,461
Vancouver, Wash	1,722
Van Wert, O	4,081
Versailles, Ky	2,126
Vicksburg, Miss	11,814
Vincennes, Ind	7,680
Vineland, N. J	2,519
Vinton, Io	2,906
Virginia C., Nev	10,917
Wabash, Ind	3,800
Wabasha, Minn	2,088
Waco, Tex	7.295
Waldoboro (tp.), Me	3,758
Walla Walla, Wash	3,588
Waltham (tp.), Mass	11,712
Warren, O	4,428
Warrensburg, Mo	4,049
Warsaw, Ind	3,123
Washington, D. C	147,293
Washington, Ind	4,323
Washington, Io	2,949
Washington, N. C	2,462
Washington, O	3,798
Washington, Pa	4,292
Waterbury, Conn	20,270
Waterford, N. Y	1,822
Waterloo, Io	5,630
Waterloo, N. Y	3,893
Watertown, N. Y	10,697
Watertown, Wis	7,883
Waterville (tp.), Me	4,672
Waukegan, Ill	4,012
Waukesha, Wis	2,969
Waupun, Wis	2,353
Wausau, Wis	4,277
Waverly, Io	2,345
Waverly, Md	3,790
Weatherford, Tex	2,046
Wellington, Kan	2,694
Wellsville, O	3,377
West Bay C., Mich	6,397
Westchester, Pa	7,046
Westfield (tp.), Mass	7,587
Westminster, Md	2,507
Weston, W. Va	1,517
West Troy, N. Y	8,820
Weymouth (tp.), Mass	10,570
Wheeling, W. Va	30,737
Whitehall, N. Y	4,270
Whitewater, Wis	3,617
Wichita, Kan	4,911
Wilkesbarre, Pa	23,339
Williamsport, Pa	18,934
Wilmington, Del	42,478
Wilmington, N. C	17,350
Winchester, Va	4,958
Winfield, Kan	2,844
Winona, Minn	10,208
Winston, N. C	2,854
Winterset, Io	2,583
Woburn (tp.), Mass	10,931
Woodbury, N. J	2,298
Woonsocket, R. I	16,050
Wocster, O	5,840
Worcester, Mass	58,291
Wyandotte, Kan	6,149
Wyandotte, Mich	3,631
Xenia, O	7,026
Yankton, Dak	3,431
Yazoo City, Miss	2,542
Yonkers, N. Y	18,892
York, Pa	13,940
Youngstown, O	15,431
Ypsilanti, Mich	4,984
Yuma, Ariz	1,200
Zanesville, O	18,113



Approximate area, 84,970 square miles. Population, according to U. S. Census of 1870, 86,786; in 1880, 143,963.

GEOGRAPHICAL POSITION.—AREA.

Utah Territory lies in the middle of the western half of the United States, partly in what is known as the "Great Basin". * It joins Idaho and Wyoming on the north, Colorado and southern Wyoming on the east, Arizona on the south, and Nevada on the west.

It is embraced between the 37th and 42d parallels of north latitude, and the 109th and 114th meridians of west longitude, lying in the same belt with Ohio, Pennsylvania, and Virginia, on the east, and northern California on the west.

Utah is rectangular in form, extending 350 miles north and south, and 270 miles east and west, is somewhat larger than the six New England States combined, and contains about 85,000 square miles of surface.

PHYSICAL FEATURES.

Natural Divisions.—For convenience, the Territory of Utah may be divided into two nearly equal physical regions, separated by the Wahsatch and Uintah Mountains. The first, included within the "Great Basin", lies in the western and northern portions of the territory; the second, occupying the Colorado plateau, lies in the eastern and southern portions. The part lying within the "Great Basin" may again be divided into a mountain and valley region, and less extensive desert tracts lying south and west of the Great Salt Lake and in the vicinity of Sevier Lake.

Surface.—Located on the western slope of the Rocky Mountains, Utah presents a great diversity of surface, varying from the level of the broad desert on the west, to the towering heights of the Wahsatch in the center, and beyond, east and south, to the elevated plains of the Colorado. Its lofty mountains, picturesque lakes, deep and rocky cañons, give it a wild and romantic appearance.

The mean elevation of the territory is 5,000 feet above the level of the sea. The lowest part of the "Great Basin", occupied by the Great Salt Lake, is 4,200 feet from the same level. From these levels rise the mountain ranges and peaks, the highest reaching an altitude of 14,000 feet.

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* The "Great Basin" is an elliptical depression of the surface of the country, lying partly in Utah and partly in Nevada. It extends north and south about 350 miles, and varies in width from 50 to 300 miles.

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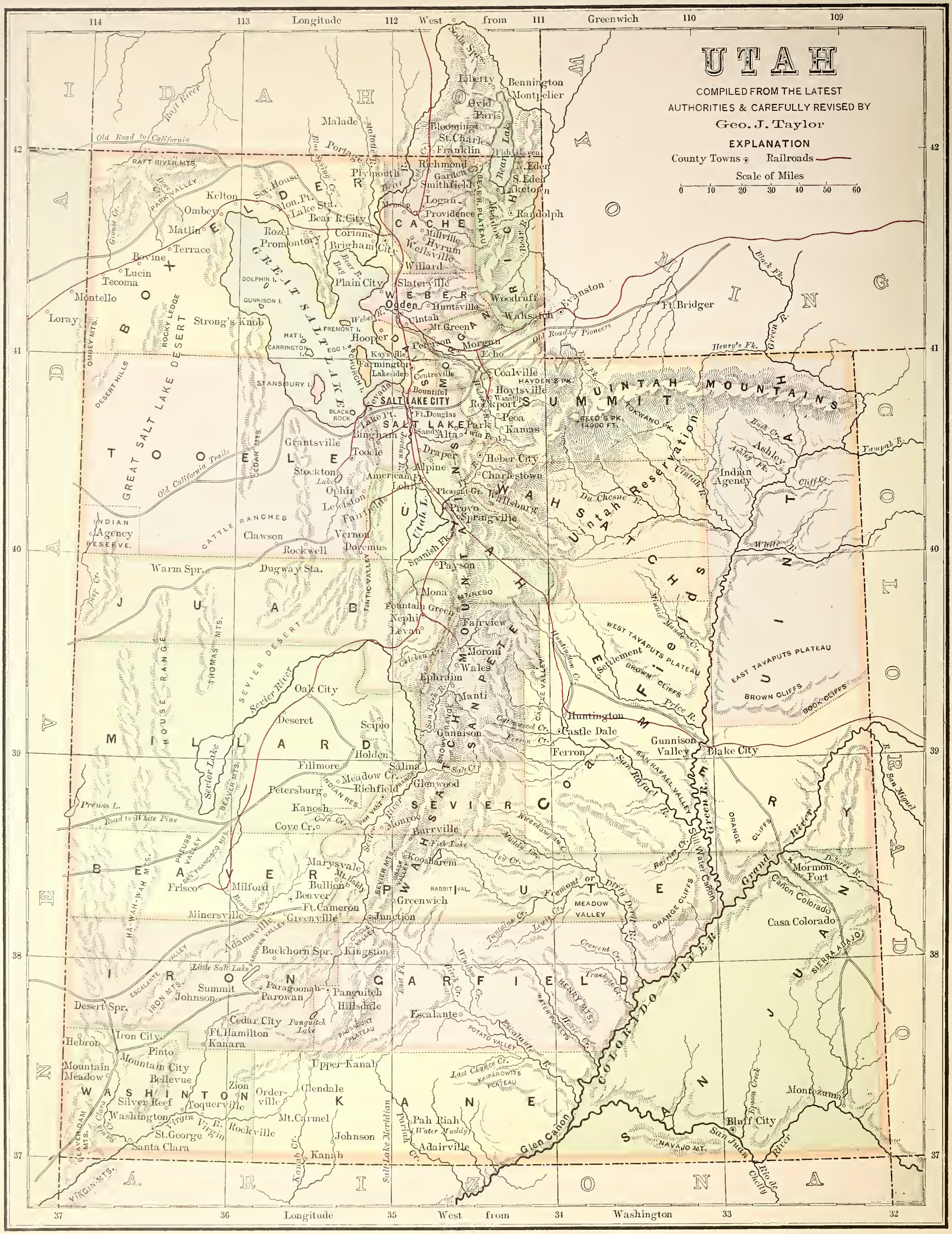


UTAH

COMPILED FROM THE LATEST AUTHORITIES & CAREFULLY REVISED BY

Geo. J. Taylor

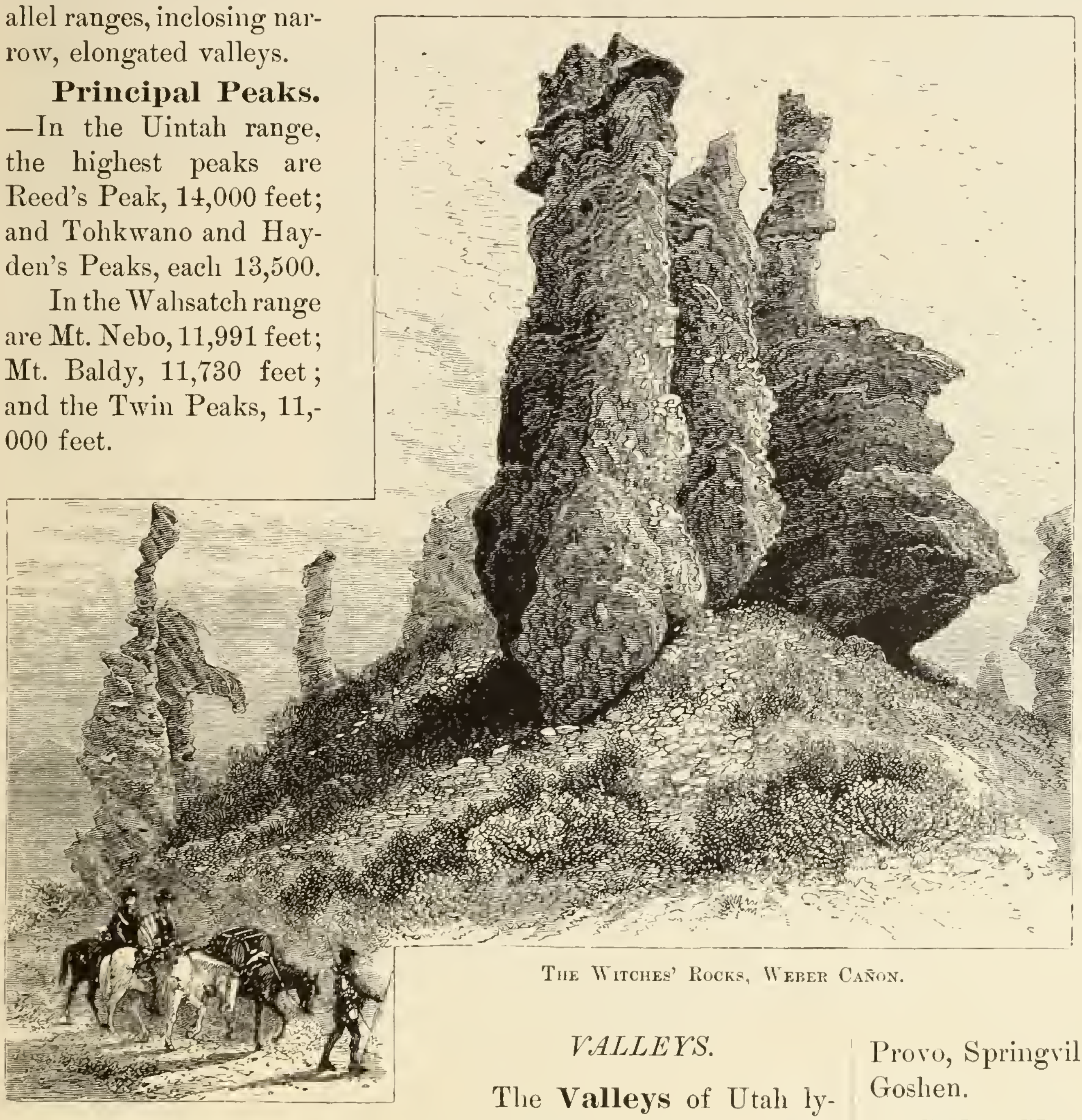
MOUNTAINS.

The **Wahsatch Mountains** form the central axis of the territory, extend in a curvilinear direction southwesterly, and constitute the principal range. The Uintah Mountains, in the northeast, extend from the Wahsatch on the west, to the Green River on the east, joining the Wahsatch at right angles. These two ranges form almost the entire water-shed of the territory.

The other mountains are either spurs of these ranges, or low, detached, generally parallel ranges, inclosing narrow, elongated valleys.

Principal Peaks.—In the Uintah range, the highest peaks are Reed's Peak, 14,000 feet; and Tohkwano and Hayden's Peaks, each 13,500.

In the Wahsatch range are Mt. Nebo, 11,991 feet; Mt. Baldy, 11,730 feet; and the Twin Peaks, 11,000 feet.



THE WITCHES' ROCKS, WEBER CAÑON.

VALLEYS.

The **Valleys** of Utah lying within the Great Basin contain almost its entire population.

In consequence of the limited rainfall in the territory, only those portions are fitted for agriculture that have streams accessible for irrigation. For this reason, these valleys, with their fertile soil, are almost the only habitable portions of the territory.

The soil of the desert portion, consisting chiefly of clay strongly impregnated with alkaline minerals and salt, could not be cultivated, perhaps, even were rain abundant or water for irrigation accessible.

Much of the Colorado plateau is also rendered barren through the impossibility of obtaining water for purposes of irrigation, from the deep, cañon-like gorges occupied by the rivers and other streams of this region.

Bear River Valley, taking its name from the river along which it lies, is found in the extreme northeastern section of the territory. The portion lying in Utah is about six miles wide and seventy in length. Ranches are numerous, and the inhabitants are chiefly engaged in grazing.

It contains the towns of Wahsatch, Woodruff, and Randolph.

Bear Lake Valley, so called from the lake which it borders, is only partly in Utah, most of the valley being found in Idaho.

Its settlements in Utah are Garden City, Laketown, and Meadowville; those in Idaho are Paris, Bloomington, St. Charles, and Fish Haven, besides others that are smaller.

Farming and dairying are the chief occupations.

Cache Valley, southwest of Bear Lake Valley, is a fertile and well-watered tract fifty miles long, with an average width of twelve miles. Nearly the entire valley is under cultivation, and it is one of the best grain-growing regions in the territory.

It contains many prosperous settlements, among which are Logan, Richmond, Smithfield, Hyde Park, Millville, Providence, Hyrum, Paradise, Wellsville, Mendon, Clarkston, and Newton.

Salt Lake Valley extends along the eastern border of Great Salt Lake, and south of it to include Jordan River Valley, making its entire length 120 miles by about 30 in width over the Jordan Valley, and perhaps five to ten where it borders the lake.

Its towns, counting from the north, are Corinne, Brigham City, Willard, Ogden, Kaysville, Farmington, Centreville, Bountiful, Salt Lake, Sandy, Draper, and Herriman.

Tooele Valley lies west of Salt Lake Valley, beyond the Oquirrh Mountains.

Its towns are Grantsville and Tooele City.

Utah Valley is a fertile tract of land, about six miles in width, lying east and south of Utah Lake.

It contains many flourishing towns, as Lehi, American Fork, Alpine, Pleasant Grove, Provo, Springville, Spanish Fork, Salem, Payson, Santaquin, and Goshen.

Cedar Valley, lying west of Utah Valley, contains two settlements, Fairfield, formerly Camp Floyd (occupied by Johnston's army in 1858–'61), and Cedar Fort.

The Great Pah Vant Valley extends southward from Utah and Cedar Valleys, through Juab, Millard, Beaver, and Iron Counties, to the rim of the Great Basin, a distance of nearly 150 miles.

It consists of a series of smaller valleys more or less obscurely defined, lying west of the Sanpitch, Pah Vant, Beaver, and Parowan Mountains (sectional names of the more western of the two principal ranges of the Wahsatch in the south), and extending to the border of the Sevier Desert.

Among these smaller valleys are Tintic, containing the town of Eureka; Juab, containing the towns of Mona, Nephi, Levan, and Juab; Fillmore, containing Scipio, Holden, Fillmore City, Meadow, Petersburg, and Kanosh; Beaver, containing Beaver City, Greenville, Adamsville, and Minersville; Parowan, containing Paragoonah, Parowan, and Summit.

It also includes the valley of the lower Sevier River, containing the town of Deseret, the Sevier Lake, Preuss Valley and Lake, and the Little Salt Lake.

Lying east of the Sanpitch range, between that and the Snowy range (a division of the east range of the Wahsatch), is San Pete Valley, watered by the Sanpitch River, and one of the best grain-producing districts in Utah. It contains the towns of Fairview, Fountain Green, Moroni, Mt. Pleasant, Spring City, Wales, Ephraim, Manti, Fayette, and Gunnison.

Farther south, between the Pah Vant, Beaver, and Parowan ranges on the west, and the Sevier range on the east, extends for nearly 150 miles the Valley of the upper Sevier River.

Its settlements, enumerating from the north, are Salina, Glenwood, Richfield, Monroe, Joseph, Marysvale, Circleville, Kingston, Panguitch, and Hillsdale.

Great Salt Lake, from Promontory Ridge.

The upper or mountain valleys are those of the Ogden River, called the Ogden Valley, with its town of Huntsville; of the Weber River, called Weber Valley, containing Enterprise, Morgan, Weber, Croydon, Echo, Coalville, Hoytsville, Wanship, Rockport, and Peoa; Rhodes Valley, near the source, containing the town of Kamas; Parley's Park, a small valley at the head of Cañon Creek, a branch of the Weber River, containing Park City, a mining town supported by the celebrated Ontario and other mines; the valley of the Provo River, called Provo Valley, containing Heber City, Midway, Charlestown, and Wallsburg; and Grass Valley, situated along Otter Creek, an affluent of the Sevier, and containing the towns of Greenwich, Koosharem, and Burrville.

Very few of the valleys on the eastern slope of the Uintah and Wahsatch Mountains are susceptible of cultivation.

A settlement is found on Ashley's Fork, a stream flowing from the Uintahs, and a few in Castle and Rabbit Valleys, near the sources of the San Rafael and Dirty Devil Rivers in the Wahsatch.

On the southern slope of the rim of the Great Basin, along the Virgin River and its tributaries, are found the settlements of St. George, Washington, Santa Clara, Leeds, Silver Reef, a mining town, Toquerville, Bellevue, Kanara, Cedar City, Virgin City, Grafton, Duncan, Springdale, and Shonesburg; also Mt. Carmel, Glendale, and Orderville, in a cañon of the Virgin River known as Long Valley; also Kanab, on Kanab Creek; and Hebron and Hamlin, near the head of Meadow Creek, flowing through the Mountain Meadows, the scene of the horrible massacre of emigrants in 1857.

NATURAL CURIOSITIES.

Great Salt Lake, the Dead Sea of America, the real and uncompromising desert beyond it, the warm and hot sulphur springs near Salt Lake City, other warm mineral springs twenty miles south, the iron carbonate springs north of Ogden, the formation springs in Provo Valley, the grand and picturesque cañons, their many hieroglyphic rocks, the numerous extinct volcanoes, earthquake-chasms with their ice-caves in the north, the Cañon of the Colorado in the south, the extensive lava-fields in the center west of Fillmore, and the many cloistered, picturesque mountain-lakes everywhere,—are some of the natural curiosities abounding in Utah, that make it truly a wonderland.

WATER DIVISIONS.—LAKES.

Great Salt Lake, within the Great Basin, in the northwestern part of the territory, is 4,200 feet above the level of the sea, is 83 miles long, and has an average width of 40 miles. It contains several islands, the largest of which are Church or Antelope, Stansbury, Fremont, and Carrington. These islands are little else than the summits of low mountain-ridges, the largest, Church Island, being 16 miles in length.

Successive water-marks, at different elevations on the sides of the adjacent mountains, show that it was once a vast inland sea extending south, north, and west, for hundreds of miles. It now averages less than forty feet in depth.

The water is a strong brine, containing nearly 20 per cent. of common salt in solution. This gives it a specific gravity of 1·17, and a buoyancy so great as to prevent the body of the bather from sinking entirely below its surface. The salt and other mineral substances in solution also give to the water tonic and other highly invigorating qualities, so that annually many invalids and pleasure-seekers resort to the shores of the lake for the purpose of bathing in its waters. In consequence also of this strong mineral character of the lake, it is incapable of supporting any form of animal or vegetable life, if we may except a species of brine shrimp, a minute crustacean peculiar to pure salt-water.

Great Salt Lake has no outlet, though several rivers and numerous other streams continually flow into it. The only compensation, therefore, for this constant influx of water, is through evaporation. The exact correspondence between the rise and fall of the lake, and the rainfall and heat in the Great Basin, proves this theory to be correct.

Utah Lake.—Twenty-one miles south of Great Salt Lake, and connected with it by the Jordan River, is Utah Lake, a body of fresh water abounding in fish. It is twenty-seven miles in length by twelve miles in width, and is 4,556 feet above sea-level.

Bear Lake.—In the extreme north and at a still greater elevation, 5,931 feet, is found Bear Lake, lying partly in Utah and partly in Idaho. It is twenty miles in length by eight miles in breadth, and its deep-blue waters, its beautiful beach, and its surrounding mountain scenery, render it the loveliest and perhaps the most picturesque lake of the territory.

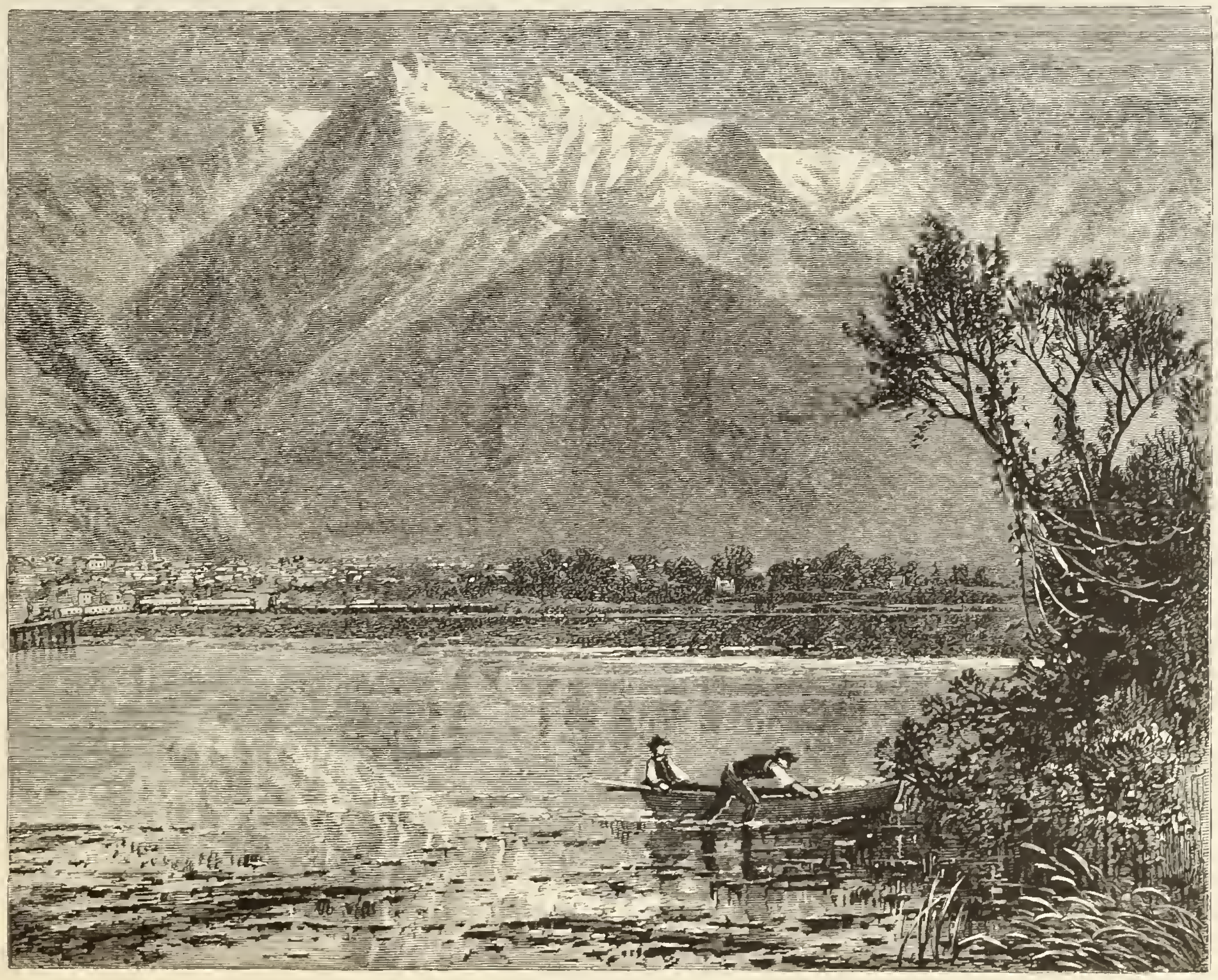
Sevier Lake has about the same dimensions as Bear Lake, and lies west of the central part of the territory, in Millard County. It is situated in a desert tract of country, is shallow, has no outlet, no well-defined shores, except on the south side, and is often known as "the Sink of the Sevier River." Its waters are highly charged with mineral matter, and contain no fish nor other forms of life.

Fish Lake in Piute County, and **Panguitch Lake** in Garfield County, are small mountain-lakes abounding in trout, and are otherwise remarkable only for their picturesque scenery and as pleasure resorts.

RIVERS.

Green River is one of the longest rivers in Utah. It enters the territory from Wyoming, sweeps around the Uintah Mountains, flowing nearly southwest two hundred miles to its junction with the **Grand River,** which enters the territory from Colorado on the east.

The union of these two rivers forms the **Colorado River,** which cuts its profound rock-chasm across the southeastern part of the territory, and enters Arizona, to run for 300 miles in the Grand Cañon on its way to the Gulf of California.



Ogden, and Wahsatch Range.

The Colorado River, therefore, through its affluents, the Uintah, Green, Price, San Rafael, Dirty Devil, Escalante, Pariah, and Rio Virgin, on the west,—and the White, Grand, and San Juan Rivers, on the east,—drains the eastern and southern parts of Utah outside of the Great Basin.

Within the Great Basin the principal streams are Bear River in the north, Weber and Ogden in the northeast, and the Jordan farther south, all flowing into the Great Salt Lake; also the Provo or Timpanogus River, rising in the Uintah Mountains, flowing through the Wahsatch, and forming the principal tributary of Utah Lake; and the Sevier River, which rises by two forks in the southern rim of the Great Basin, flows north between two parallel ranges of mountains for nearly 150 miles, then southwest for a distance of nearly 50 miles, to Sevier Lake, of which it is the only tributary.

While the rivers of Utah are not navigable, they furnish excellent motive-power, and together with all the smaller mountain-streams are of great utility for the purposes of irrigation. These facilities have contributed essentially in redeeming Utah from its original desert condition, and through agriculture, manufactures, grazing, and mining, thus rendered possible, given her wealth and prosperity.

CLIMATE AND SOIL.

Climate.—Owing to the elevation of Utah above sea-level, its situation between the lofty rain-barriers of the Sierra Nevada on the west and the Rocky Mountains on the east, and its generally mountainous character, its atmosphere is light, dry, clear, and invigorating.

Notwithstanding there is a great variation in temperature incident to a change of season, latitude, and elevation, the climate is in all parts very salubrious. In summer it is agreeably cool and refreshing in the upper valleys, mild in the lower, and decidedly warm in the extreme south and near the desert tracts.

The fall of snow in winter is light in the lower valleys, but deep in the mountain-cañons and upper valleys, furnishing rich supplies of water for irrigating the valleys below during the hot and arid season of farming.

The **Soil** of the valleys is inherently fertile, and rendered unproductive only through a deficient supply of moisture. In many parts the soil is at first impregnated with alkaline salts, but these elements rapidly disappear under a system of thorough irrigation.

Recently, in some parts, "dry farming", as it is called, has been extensively and successfully carried on. That is, it has been found possible, simply through winter irrigation and the effect of spring and early summer rains, to mature large crops of wheat and other early cereals.

LEADING INDUSTRIES.

Agriculture.—Though not eminently an agricultural country, the present resources of Utah are found to consist largely in its farm-products. The limited amount of arable land, and the necessity for expensive systems of artificial watering, compel careful tillage, the result of which is extensive yields in nearly all farm-crops.

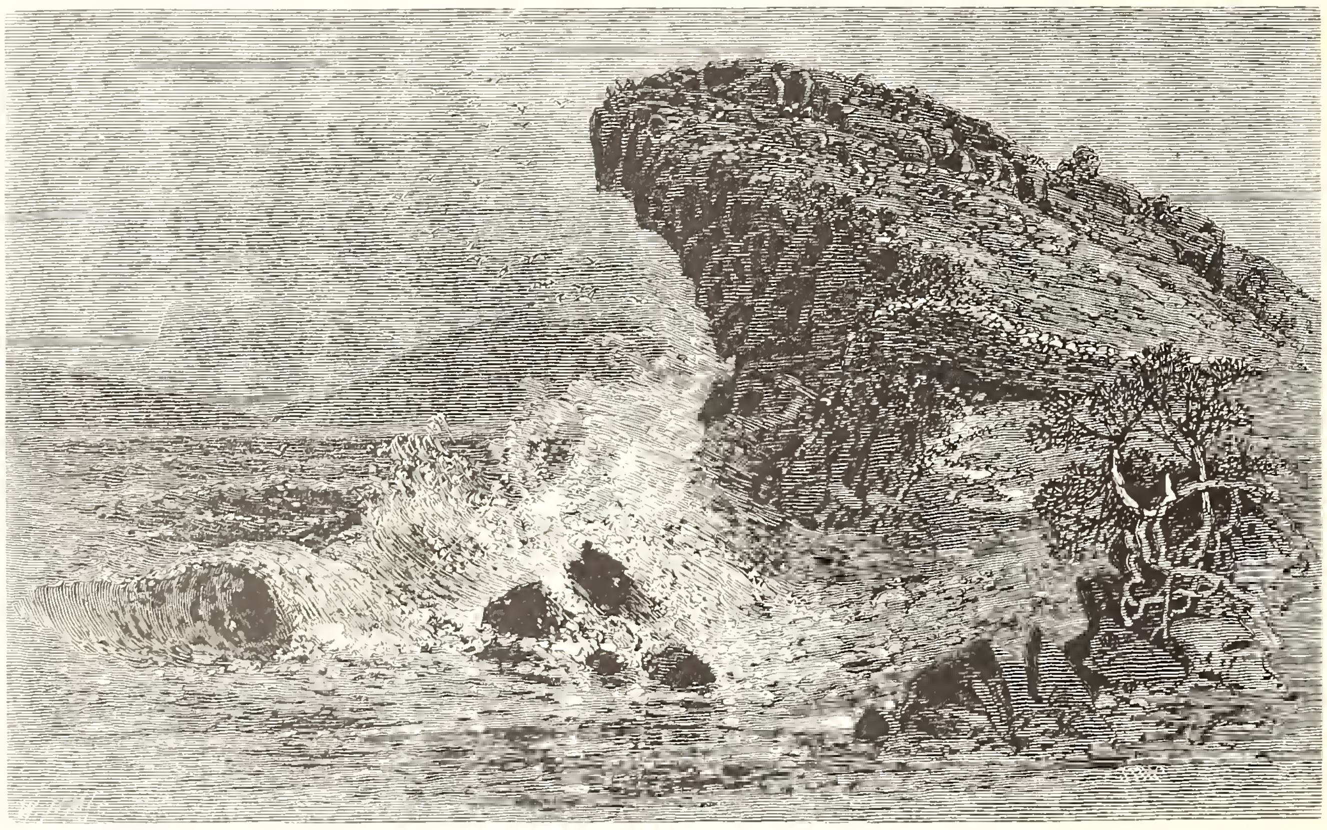
Over 100,000 acres are devoted to the cereals, wheat, oats, barley, and corn, and their yield exceeds 2,000,000 bushels annually. Wheat alone, as the great staple, furnishes three-fourths of this product, and requires the same proportion of the acreage for its cultivation.

Chinese sugar-cane, rye, buckwheat, and other products favored by the same latitude elsewhere, are also raised. Potatoes, peas, beets, turnips, and other vegetables, are also extensively cultivated as field-crops. The first, of peculiar and excellent flavor, are shipped in large quantities.

Cotton, tobacco, and wine, are produced in southern Utah.

Horticulture, including the production of orchard-fruits, is another considerable resource. Fine kitchen-gardens exist in many parts of the territory, patronized and encouraged by the markets afforded by the larger towns and the numerous mining-camps.

The climate and soil, except in the extreme north and the upper valleys, are well adapted to fruit-growing. Apples, peaches, apricots, pears, and plums, together with a great variety of the smaller fruits, such as strawberries, raspberries, currants, etc., are produced in abundance, and of remarkably fine flavor, in all the middle valleys; while below the southern rim of the Great Basin, grapes and oranges grow with the luxuriance of a semi-tropical climate.



Black Rock, Great Salt Lake.

Stock-Raising.—The fine pasturage afforded by the native bunch-grass and other hardy varieties that cover the mountain-slopes and even the arid valleys, has made stock-raising a valuable industry in Utah. Large herds of cattle, sheep, and horses, are annually driven in summer to the mountain cañons and slopes, and in the winter to the lower valleys, where the nutrient dried grass is so abundant and the weather so mild that they subsist without other care or expense than that of herding.

Great numbers of cattle and horses are driven or shipped eastward every year, and, with the millions of pounds of wool exported annually, furnish one of the most important sources of revenue to the territory.

Manufactures.—While the manufactures of Utah comprise almost every variety of product for domestic use, none of them are very extensive except, perhaps, those of flour, of bullion from native ores, and of woolen fabrics; more than five thousand spindles are employed in the manufacture of woolen goods alone.

While these manufactures do not, except in the items of flour and bullion, furnish a direct revenue to the territory, they do so indirectly by preventing the outlay of their value for importations.

Mining.—Already the mineral deposits of Utah are the source of considerable profit and income to the country. But their development has scarcely begun.

Silver and, to some extent, gold mining have been carried on with great profit. The most productive mines at present, however, are silver, lead with which the silver is generally combined, and coal. Iron of the best quality exists in inexhaustible quantities in Iron County, and is found in many other parts of the territory.

Besides silver, lead, gold, iron, and coal, there are valuable deposits of sulphur, gypsum, salt, ochres, mineral wax, manganese, antimony, bismuth, copper, zinc, arsenic, cobalt, cinnabar, mica, kaolin, fire-stone, and fire-clay.

Fine quarries of granite, sandstone, limestone, marble of good quality, and slate, are found in several parts of the territory.

In every county, mines of some kind are being developed.

EDUCATION.

Common Schools.—Though Utah has no permanent school fund, like nearly all the states, derived through munificent grants of land made by the General Government from the national domain, still she has organized and now maintains an efficient system of public schools.

Each county is divided into a number of school-districts, which are severally controlled by a board of three trustees. The counties have each a district School Superintendent, and a board of examination, to determine the proficiency of applicants for certificates as teachers. The whole is under the supervision of a Territorial Superintendent.

A tax of three mills on each dollar's valuation of property in the territory, except mines, amounting to nearly one-half the entire revenue, is appropriated annually by the Legislature for the payment of district school-teachers alone. Besides, each district is authorized by law, under certain conditions, to tax itself not to exceed two per cent annually for general school purposes.

Higher Instruction.—The University of Deseret, located in Salt Lake City, was founded in 1850. It is a state institution, maintained in part through appropriations made by the Territorial Legislature. It has a preparatory, a normal, a scientific, and a classical-preparatory department; the normal alone admitting annually eighty students free of charge.

The University is in possession of a library of over three thousand volumes, has good facilities for chemical analysis, and possesses apparatus for illustrating with a good degree of fullness the subjects of natural history and science.

The Brigham Young Academy, located at Provo, is an institution for primary, intermediate, and higher instruction. It also has a normal department to which twenty students are admitted annually free of charge through appropriations from Utah County. Its facilities for instruction are good and are rapidly increasing.

The local territorial officers are a Treasurer, an Auditor, a Territorial Superintendent of District Schools, and a delegate to Congress, elected by the people; a Librarian, a Chancellor and twelve Regents of the University, and a Sealer of Weights and Measures, elected by the Legislature in joint session.

County, precinct, and school-district officers, are usually elected by the people.

Salt Lake City, from the Wahsatch Range.

The Brigham Young College, at Logan, is also a flourishing school for advanced instruction, and contains a normal department.

There are also the Salt Lake Academy, St. Mary's Academy, St. Mark's School, Collegiate Institute, and Rocky Mountain Seminary—all in Salt Lake City—that may be classed as schools for higher or graded instruction.

All except the district schools and the University of Deseret are under the special patronage of certain religious denominations.

POLITICAL ORGANIZATION.

The **Government** of Utah is partly federal and partly local.

The United States officers, appointed by the President and confirmed by Congress, are a Governor, a Secretary, three Judges of District Courts, an Attorney, a Surveyor-General, a Receiver of Public Moneys, a Register of Land-office, a Collector, and five Commissioners.

The local laws are made by a Territorial Legislature embracing two divisions, the Council and the House of Representatives; the former consisting of twelve and the latter of twenty-four members, elected biennially by vote of the people.

The Legislature, by direction of the United States Congress, holds its sessions for periods of sixty days each, beginning the first Monday in January every alternate year, at Salt Lake City, the capital of the territory.

Congress may at its option rescind all laws passed by the Legislature, and the Governor may at his pleasure withhold his signature from any act of that body, when it fails to become a law.

PRINCIPAL CITIES AND TOWNS.

Salt Lake City, the capital and metropolis of Utah, is situated in Salt Lake Valley, at the foot of the Wahsatch Mountains, about ten miles from the shore of the Great Salt Lake. It contains a number of fine and some remarkable public buildings, as the Temple, now in course of erection, the Tabernacle, the Assembly Hall, the Theatre, the Opera-House, the Catholic Hospital, etc.

In common with other cities and towns of Utah, Salt Lake is in some respects peculiar and different from other cities of the world. Its streets are very broad, cross each other at right angles, and are bordered by beautiful shade-trees, beneath which flow constantly refreshing currents of clear mountain water.

Its blocks are large, comprising ten acres each, and, except in the business portion, abound in beautiful gardens and tasteful parterres. It may quite appropriately be termed a garden city.

Its population in 1880 was 20,768.

Ogden City (population, 6,069) lies thirty-eight miles north of Salt Lake City. From the fact that four railroads—the Union Pacific, the Central Pacific, the Utah and Northern, and the Utah Central—from the four points of the compass, meet in this place, it is sometimes called the "Junction City."

Its favorable geographical position, and fine commercial and manufacturing facilities, give it rare opportunities for becoming a city of large size and importance.

Ogden City contains a large Central School building, the finest structure of the kind in the territory, iron-works, an observatory, and fine business blocks, which indicate the advantage of its location and the enterprise of its citizens.

Provo (population, 3,432), lying forty-seven miles south of Salt Lake City, on Provo River, near the eastern shore of Utah Lake, contains the largest woolen-mills in the territory, running 2,880 spindles; also the Brigham Young Academy, and the Territorial Insane Asylum, now in course of erection.

It has the advantages of two important railroads, the Utah Central and the Denver and Rio Grande.

Logan (population, 3,396) is situated eighty miles north of Salt Lake City, on the Logan River, near the center of the eastern side of Cache Valley. Its location on the river so near the mountains gives it the advantage of a fine water-power for manufacturing purposes.

It is noted for a magnificent temple, now (1882) nearly completed; the Brigham Young College, the most amply-endowed school of the territory; and as one of the largest wheat emporiums in the Rocky Mountain region.

The facilities for transportation at present are confined to the Utah and Northern Railway, though other roads are projected.

St. George (population, 1,332), situated below the southern rim of the Great Basin, on the Colorado Slope, at the junction of the Virgin and Santa Clara Rivers, is the metropolis of a semi-tropical region yielding cotton, grapes and wine, figs, and other productions of warm climates, and known familiarly in local parlance as "Utah Dixie." It contains a large and beautiful temple, and fine gardens of tropical fruits.

Its trade in wine and cotton is confined almost exclusively to the north, though fruit, vegetables, and domestic products, find a ready market in neighboring mining-camps.

Beaver City (population, 1,732) is a place of considerable note, lying in the southern part of the Great Basin. Its resources are chiefly agricultural, from the fertile valley of the Beaver River, on which it is situated, though it has a fine woolen-mill in operation, and some productive mines in the vicinity. Fort Cameron, a United States military post, is located near the city. Beaver City is also the seat of the 2d U. S. District Court of the territory.

Manti, the chief town of San Pete Valley, containing a large and beautiful temple; Fillmore, near the center of the territory, and its former capital; and Brigham City, in the north, are also towns of considerable importance. Alta, Park City, Silver Reef, and Marysvale, in the Wahsatch; Bingham, Ophir, Eureka, and Stockton, in the Oquirrh range; and Frisco, in the San Francisco Mountains, near the Sevier Desert, are the principal towns devoted exclusively to mining.

HISTORICAL SKETCH.

Utah Territory originally belonged to Mexico, but was ceded to the United States in 1848 by the Treaty of Guadalupe Hidalgo. In the preceding year, a hardy band of 142 Mormon pioneers, under the leadership of Brigham Young, had left Council Bluffs, on the Missouri River, and forced their way through almost trackless plains and mountains to the valley of the Great Salt Lake. They settled on the present site of Salt Lake City, then a sage-brush desert.

With patriotic allegiance to their native land, these pioneers began their settlement under the floating flag of the United States, giving the name of "Deseret" to the newly settled region.

Other immigrants, consisting entirely of Latter-Day Saints, or Mormons, continued to arrive, and by the end of a year their number amounted to 2,000. From time to time since, there have been accessions to the population, commercial facilities have increased, and progressive changes in the political organization have taken place, until at present the community numbers 150,000; there is easy communication, through numerous railroads and telegraphs, with nearly all parts of the territory and with both seaboards; while the political aspect is that of a territory possessing every constitutional requisite for becoming a state of the Union.

APPLETONS'
STANDARD
GEOGRAPHIES.